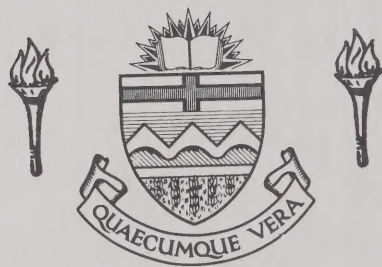


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The undersigned certify that they have read, and concurring to
the Faculty Effects of Modeling and Role-Playing on Assertive

thesis entitled "Effects Behavior in Children

Behavior in Children," submitted by Howard Lawrence Rudner in partial
fulfilment of the requirements for the Degree of Doctor of Philosophy

in Counseling and School Psychology by

Howard Lawrence Rudner



A Thesis

Submitted to the Faculty of Graduate Studies and Research

in Partial Fulfilment of the Requirements for the

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ABSTRACT

Previous studies have found both modeling and role-playing procedures to be powerful tools for teaching new skills to adults and children alike. Although most of the recent literature has dealt with teaching assertiveness to the adult population, there is a great need to help children learn how to respond appropriately in situations where they might be called upon to stand up for their rights. The purpose of this study was to measure the relative effectiveness of three different types of treatment packages (modeling, directed role-playing, and combined modeling and role-playing) in teaching children assertive skills over a brief period of time (15 minutes).

A total sample of 72 Grade 6 children were randomly assigned to four different groups: modeling (MOD); directed role-playing (DR); modeling plus directed role-playing (MOD + DR); and a no-treatment control (CONT). MOD Ss viewed a specially prepared 13 minute videotape depicting different adult and peer models handling a variety of typical situations requiring assertive responses. DR Ss only practiced one of these situations without seeing the film. MOD + DR Ss both practiced one scene and then viewed the corresponding scene on videotape. CONT Ss neither viewed the film nor practiced the scene. Subjects were not told beforehand that they were participating in a study designed to teach assertive behavior. After treatment, each child individually entered an unobtrusive three minute test situation requiring some assertive skill to overcome interference and complete a task. Level of assertiveness was measured on the basis of a discrete, specific response, time taken to respond (response latency), duration

of response, total responding time, number of requests, tone of voice (affect), speech volume (loudness), and overall assertiveness. These specific verbal and nonverbal variables were videotaped for each child and later rated independently by three trained judges.

The results of this investigation indicated that the use of a fifteen minute modeling and directed role-playing treatment package or a directed role-playing treatment package alone effected behavioral change in elementary school children towards greater overall assertiveness in a specific test situation. The combined group in addition effected change towards more appropriate affect. On all of the eight measures, the treatment groups obtained greater assertive scores than the control. However, only on two of these scales was the difference found to be at a significant level. Moreover, significant differences among the treatment packages were obtained only between the directed role-playing and the combined treatment packages on the measure of affect. Finally, overall assertiveness was found to correlate highly with all but two of the other variables.

On the basis of a questionnaire designed to measure "acquisition" of assertive knowledge, it was found that the modeling groups tended to choose the greatest number of assertive responses. It was suggested then that the modeling component may have contributed to the "acquisition" of assertive behavior, while the role-playing component contributed to the "performance" of the behavior. The implications are that perhaps the addition of the role-playing to the complete modeling paradigm may result in a potent treatment package.

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CHAPTER I

Introduction

Patterns of behavior can be acquired through direct experience or by observing the behavior of others. Observational learning, according to Bandura (1969a, 1971), is a principal means of acquiring new response patterns in animals and humans alike. Modeling or observational learning is the process of acquiring new responses by imitating or simply observing the behavior of another individual. In contrast with the acquisition of new responses through differential reinforcement of successive approximations, learning through observation need not involve direct reinforcement of the learner, and need not, in fact, involve overt performance of the new behavior until the test situation, sometimes considerably delayed from the acquisition phase (Bandura, 1969a). Modeling theory does suggest strongly that the learning process can be considerably shortened by making use of the human being's capacity to learn through symbolic processes; i.e. from being shown what to do and observing the effects of performance by others (Bandura, 1969a).

There is abundant evidence to indicate that in the case of human adults and children, a wide variety of response patterns differing considerably in content, novelty, and complexity have been transmitted through modeling procedures (Bandura, 1969a, b, 1971; Campbell, 1961; Flanders, 1968; Thomas, 1973). Behavior which seems to be particularly susceptible to learning through modeling includes aggression, sex-role behavior, and values and attitudes (Thomas, 1973).

Modeling procedures are also frequently utilized for a wide variety

of treatment purposes (Bandura, 1969a, 1973). According to Bandura (1969a), there are many treatment approaches in which modeling techniques, variously labeled psychodramatic enactment (Moreno, 1958; Sturm, 1965), behavior rehearsal (Lazarus, 1966; Wolpe & Lazarus, 1966), and role-playing (Corsini & Putzey, 1957) are employed to overcome specific response deficits or to transmit more extensive repertoires of social behavior. Modeling has been effectively employed with children in eliminating aggressive responses and some phobias.

Role-playing techniques have been used in psychotherapy for many years (e.g. Corsini, 1966; Moreno, 1946). Recently, however, Kelly (1955), Wolpe (1958), and Lazarus (1965) have proposed specifically behavioral role-playing techniques consistent with a conceptualization of psychotherapy as a learning process. The Kelly, Wolpe, and Lazarus techniques, while described in somewhat different theoretical language, share the same fundamental treatment procedures and principles: subjects with deficiencies and inhibitions in their social or interpersonal behaviors, such as nonassertive individuals, are given direct training in more efficient and effective alternative behaviors. This training is achieved through such procedures as response rehearsal, modeling, and therapist coaching. Role-playing employs the concept that emitting a response is a necessary step in its acquisition (Bergin & Suinn, 1975; Casey, 1973).

Assertive behavior has been defined differently by many writers. Following are some broad definitions as used in the present study. In an early study measuring and modifying assertive behavior in young children, Chittenden (1942) defined assertiveness as any overt response

to another's "infringing" behavior so long as the child responding maintained his status in the situation. Conversely, nonassertive behavior included immediate compliance with another's efforts to influence or infringe upon one's behavior with loss of status of the one complying.

Wolpe and Lazarus (1966) initially defined assertiveness as follows:

"Although the most common class of assertive behaviors invoked in therapeutic action is the expression of anger and resentment, the term 'assertive behavior' is used quite broadly to cover all socially acceptable expressions of personal rights and feelings" (p. 39). Wolpe (1973) later redefined assertive behavior as "the proper expression of any emotion other than anxiety towards another person" (p. 81).

Finally, Rathus and Ruppert (1973) discuss assertive talk as including demanding one's rights and insisting upon being treated with fairness and justice. A person should also be able to express his likes and dislikes spontaneously, to be open and frank, and to avoid bottling up emotions.

McFall and Marston (1970) found little evidence for a generalized response predisposition, or trait, of assertiveness; rather, "assertive behavior appeared to be a broad, nonfunctional, heterogeneous, and situation-specific response class" (McFall & Lillesand, 1971, p. 314). Consistent with this reasoning, assertiveness was therefore defined in this study operationally, through the expression of a set of specific, quantifiable component behaviors, as demanding one's rights to be treated fairly in a specified conflict situation.

The Nature of the Problem

Whether a person is "assertive" or not can directly affect his social affairs. Timid and nonassertive individuals fail to obtain fair treatment, and commonly experience anxieties during social confrontations (Rathus, 1973). Moreover, passive people will tolerate daily outrage, allow themselves to be shoved around and their rights threatened and violated (Moriarty, 1975). Timid, indecisive people who cannot express their legitimate rights are those "obsequious individuals who invite maltreatment through their passivity.... People who are unable to behave assertively will suffer considerable aversive control by others...." (Bandura, 1973, p. 258). Lack of assertiveness is indeed frequently a source of referrals to both psychologists in secondary schools and to university counseling centers (Rathus & Ruppert, 1973). Children as well are not immune to this social problem. In his study of preschool children, Dorman (1973) found that up to 20% of the originally tested population was nonassertive.

An abundance of research related to the topic of assertiveness has appeared since 1970, and even some books have been published on this topic (e.g. Alberti & Emmons, 1970; Fensterheim & Baer, 1975). A review of the literature until then, however, indicates a paucity of research on this topic in general and, save for some early studies of preschool children by Jack (1934), Page (1935), and Chittenden (1942), and also a more recent one by Dorman (1973), virtually none on assertive behavior in children. That assertiveness in children is not adequately studied is indicated by the dearth of research investigations

on this issue even in the last five years. This author feels that the issue of nonassertiveness in children warrants more attention than this.

Implications and Purpose of the Study

It has been noted that nonassertiveness or lack of assertiveness is a pressing social problem for secondary school children, college students, and the general adult population. Young children as well are equally affected by the problem. Perhaps if all children, both potentially assertive and nonassertive individuals alike, could be trained in appropriate assertive skills, many of the problems and anxieties they may face in social interactions as adolescents or adults could be prevented. The techniques used to teach assertion in this study were modeling and role-playing. The educational implications of these techniques "already have stimulated both general excitement and the development of specific techniques that are relevant to pressing problems in the classroom" (Sarason & Sarason, 1974, p. iii). Such methods, if they accomplished the purpose easily and successfully, should prove useful to parents, teachers, and mental hygienists alike.

The general purpose of this study was to investigate the relative effectiveness of three different types of treatment packages in the teaching of assertive skills to elementary school children (Grade 6) over a short period of time.

More specifically, the relative effectiveness of a modeling package, a role-playing package, and a modeling plus role-playing package in teaching assertive skills over a brief period of time were examined. The dependent variables included a set of general component measures of assertive behavior as described by Eisler, Hersen, & Miller

(1973), as well as a discrete specific response. More detailed description and definition of the treatment packages and the dependent variables appear in Chapter III.

Limitations of the Study

- A. In this study, learning occurred over a short period of treatment time (15 minutes). The study is not designed, therefore, to demonstrate the permanence of the treatments nor their long-lasting effects. It is assumed, however, that with significant treatment effects, additional repeated exposure and practice to such situations may prolong the effects over time.
- B. In this study, the treatments were used with a selected sample of "average" local elementary school children. The results, therefore, might not be generalizable to all people, or for that matter, to deviate groups such as children who are particularly high or low in assertion.
- C. In this study, no claims can be made as to the relative effectiveness or importance of the individual components comprising each treatment package. Different variables within the packages make such claims impossible.

Overview of the Study

Chapter I introduces the topic of this study, setting out its purpose and importance as well as its limitations. Chapter II is a review of the literature relevant to the study, including especially research on modeling in assertive training, role-playing in assertive training, and modeling plus role-playing in assertive training.

Chapter III describes in detail the actual procedures employed in the experiment. The hypotheses are also included here. Chapter IV is an analysis and discussion of the data obtained, and Chapter V consists of a summary of the results, conclusions, and suggestions for further study.

CHAPTER II

Review of Related Literature

A. Modeling

Among the diverse classes of behavior, in children especially, that have been shaped by models are included stylistic response patterns (Bandura, Grusec, & Menlove, 1966; Bandura, Ross, & Ross, 1963b), distinctive modes of aggressive behavior (Bandura, Ross, & Ross, 1963a; Collins, 1973; Davids, 1972; Grusec, 1973; Hicks, 1965; Kuhn, Madsen, & Becker, 1967; Noble, 1973), dramatic play patterns (Marshall & Hahn, 1967), prosocial frustration reactions (Chittenden, 1942), facial expressions (Hamilton, 1973), commodity preferences (Spiegler & Liebert, 1973), teachers' preferences and behaviors (Feshbach & Feshbach, 1972; Portuges & Feshbach, 1972), social interactions (O'Connor, 1972), and picture preferences (Jeffrey, Hartmann, & Gelfand, 1972).

At an even higher level of complexity, it has been shown that through exposure to the behavior of models persons can acquire standards for self-reinforcement and self-evaluative responses (Bandura & Kupers, 1964; Bandura & Whalen, 1966; Bandura, Grusec, & Menlove, 1967; Denney, 1975; Kuncce & Thelen, 1972), conceptual behavior and formation (Flanders & Thistlethwaite, 1969; Reed, 1966; Zigler & Yando, 1972; Zimmerman & Rosenthal, 1972), perceptual judgments (Davidson & Liebert, 1972), performance of information-processing acts (Goodman, 1975), moral judgmental orientations (Bandura & McDonald, 1963; Keasey, 1973; Prentice, 1972; Sarason & Ganzer, 1973; Turiel & Rothman, 1972), altruism (Bryan & Walbek, 1970; Midlarsky, Bryan, & Brickman, 1973; Morris, Marshall, & Miller, 1973; Yarrow, Scott, & Waxler, 1973), self-

imposed delay-of-gratification patterns (Bandura & Mischel, 1965), linguistic structures (Lovaas, 1966a), and vocal and linguistic responses (Harris & Hassemer, 1972; Hursh & Sherman, 1973). The focus of the most recent research in social development seems to be that of modeling; indeed, over 40 modeling studies were published in the last year (Hetherington & McIntyre, 1975).

Modeling procedures are also frequently utilized for a wide variety of treatment purposes (Bandura, 1969a, 1973). Recent examples include the use of modeling in language therapy (Yudkovitz, Rottersman, & Lewison, 1975) and in alcohol rehabilitation (Greer & Callis, 1975).

B. Variables in Modeling

Studies have been aimed at determining the specific variables affecting the outcomes of modeling attempts. Bandura (1969a) claims that a number of attention-controlling variables, some related to incentive conditions, others to observer characteristics, and still others to the properties of the modeling cues themselves, will be influential in determining which modeling stimuli will be observed and which will be ignored.

The characteristics of the model appear to have some effect (Bergin & Suinn, 1975). Thus, models who have demonstrated high competence (Gelfand, 1962; Mausner, 1954a, b; Mausner & Bloch, 1957; Rosenbaum & Tucker, 1962), who are purported experts (Mausner, 1953) or celebrities (Hovland, Janis, & Kelley, 1953), and who possess status-conferring symbols (Lefkowitz, Blake, & Mouton, 1955) are likely to command more attention and to serve as more influential sources of social behavior than models who lack these qualities. Other distinctive characteristics,

such as age (Bandura & Kupers, 1964; Hicks, 1965; Jakubczak & Walters, 1959), sex (Bandura, Ross, & Ross, 1963a; Maccoby & Wilson, 1957; Ofstad, 1967; Rosenblith, 1959, 1961), social power (Bandura, Ross, & Ross, 1963b; Mischel & Grusec, 1966), and ethnic status (Epstein, 1966), which are correlated with differential probabilities of reinforcement, likewise influence the degree to which models who possess these attributes will be selected for emulation. Finally, more imitation is evidenced when the model is rewarded for engaging in the depicted behavior, when the observer has received prior instructions, set or expectancy to model, when he views the model as warm or attractive, when competing stimuli are minimized, especially when the observer is rewarded for modeling, and when the modeling display itself is vivid, novel, and contains several heterogeneous models (Bandura, 1969a).

Model similarity: Adult versus peer models

Similarity of observer and model has been shown to influence attitude changes and preferences (cf. Bandura, 1969a; Kanfer & Phillips, 1970; Mischel, 1971), and it is also suggested that observer-model similarity affects attention to the modeling stimulus. The importance of the subject's perception of the model's similarity to himself has recently been demonstrated also by Hirschman and Katkin (1971), who found increased galvanic skin response activity with increasing self and model similarity. Kazdin (1973) attempted to reduce fears of snakes through the presenting of either a model who was "coping" (anxious in approach but eventually successful) or "mastering" (confident and at ease in successfully approaching the snake). The coping model was more influential than the mastering model, suggesting the impact of model-to-client similarity. On the other hand, Doster and

McAllister (1973) found that a high status model affected undergraduate subjects more than a peer model. Bandura and Barab (1973) discovered as well that subjects improved regardless of similarity to the model. They concluded that fear reduction for adults and children occurred for differing reasons. Jaffe and Carlson (1972) on the basis of their results, however, question the validity of other researchers' reliance upon models in competent roles in treatment studies. They found that test anxious subjects viewing anxious models and/or negative consequences showed greater improvement in performance measures and greater self-reported test anxiety reduction than subjects exposed to calm models receiving positive consequences.

The majority of studies investigating the effects of social modeling procedures with child observers have used adult models (Bandura & Walters, 1963; Flanders, 1968), while a smaller number of studies have reported the use of peers as models (e.g. Bandura, Grusec, & Menlove, 1967b; Clark, 1965). Adult models have been shown to be more influential than peer models for elementary school age children, especially adult male models (Rabenstein, 1973). Evidence of childrens' role-playing behavior (Hartup, 1964; Levin & Sears, 1956; Maccoby, 1959; Sears et al., 1965) would also substantiate the fact that responses observed in adults are imitated by children in new contexts. While Bandura and Kupers (1964) as well have found adults to be more influential than peers, others (Hicks, 1965; Millsom, 1966; Musselman, 1968) have noted few adult-peer differences and/or unpredictable interactions with other variables. O'Connor (1967) has found adults to be more powerful than peers as models, but the degree of imitation

of peers was not unsubstantial.

Data indicates that by age seven the majority of children engage in at least as many social interactions per day with peers as they do with parents or teachers (Barker & Wright, 1955; Wright, 1967). The relative influence of adults and peers at various age levels may be, in part, a function of the type of behavior in question, for example, academic, social, or athletic (O'Connor, 1967). In matters of academics or moral judgments, then, adults are probably apt to be imitated more, while in matters of style of dress or choice of classroom leaders (the social sphere), for example, peers may be more influential, even at the relatively young age of seven or eight (Dorr & Fey, 1974).

Sex of the model

There have been practically no studies investigating the importance of the sex of the experimenter, subjects, models, and role-players, especially as they interact with each other (Friedman, 1972). Friedman (1972) notes that sex may indeed be an important variable in the effectiveness of the procedures. Grusec and Brinker (1972) discovered that elementary school boys learn more about the behavior of same-sex than of opposite-sex models (a similar, but less reliable, result was found for girls). Apparently, there is a stronger tendency for boys (or masculine children of either sex) to learn more about a male model's behavior than there is for girls (or feminine children of either sex) to learn more about a female model's behavior. The authors argued that since children are ordinarily reinforced for imitating like-sex models, it becomes advantageous for them to learn as much as possible about what like-sex models do. In this way, they are in a better position

to maximize the rewards they might later receive for imitation.

Familiarity of the model

Whether familiarity enhances or impedes imitation will largely depend on the functional value of the modeled behavior (Bandura, 1973).

...Preexperience may enhance and focus attentiveness to critical features of the models' performances and thereby augment modeling effects. On the other hand, people who have developed successful ways of behaving in given situations might be less willing to adopt new modeled patterns of unknown value than would observers who are uncertain about what actions would be most appropriate or effective (Bandura, 1973, p. 81).

Consequences to the model

Many of the types of imitative behaviors classified by Gilmore (1968) point to the importance of expectations learned by a subject from a model on how to obtain a reward, achieve a favorable judgment, or avoid punishment or other negative consequences. Bandura (1968) has noted that positive consequences occurring to a model contribute markedly in making modeling a very powerful therapeutic procedure. Consequences of the models' actions also influence self and other reward by the viewer (Bryan, 1972). A review of the literature by Thelen and Rennie (1972) concerning the effects of vicarious reinforcement on imitation, however, has shown that a substantial number of studies failed to demonstrate an increase in imitation as a function of vicarious reward. Many of these studies, however, involved cases where the reinforcement was of no special value to the subjects since they already saw value in the assigned task. Related to this issue, Friedman (1971)

indicates that the expectations of the experimenter, the experimenter's approval, and the experimenter's instructional set to the subjects may be equally as potent variables as consequences to the model.

Live versus symbolic models

Bandura (1970) suggests that live or film performance of a model is not an essential component of modeling, since modeling refers to the cognitive and representational processes which guide behavior rather than the mode through which modeling information is transmitted. Several studies have documented the effectiveness of filmed modeling situations (Bandura & Menlove, 1968; Bryan & Walbek, 1970; O'Connor, 1969, 1972; Stein & Bryan, 1972; Wolf & Cheyne, 1972). As a matter of fact, videotaping or filming the model has several advantages over the live or audiotaped model used in previous studies (Eisler, Hersen, & Miller, 1973). First, the performance of the model can be carefully rehearsed until videotape playbacks of his responses contain all the effective components of the behavior in question. Secondly, it is possible to present each subject repeatedly or every subject with identical stimuli which will not vary in any behavioral aspect.

Conclusions: Modeling variables

Rachman (1972) concludes that modeling is facilitated by a combination of audio and visual presentations, repeated practice, prolonged exposure times, the use of multiple models, the use of participant modeling, and the use of relaxation training. In relation to the apparent inconsistencies in the literature regarding the variables in modeling important for behavior change, however, Kazdin (1974) concludes that attributes of the model (e.g. competence, prestige, similar-

ity to the subject), multiplicity of models, model consequences, and other factors important in live modeling (Bandura, 1970, 1971; Campbell, 1961; Rachman, 1972) warrant further investigation in covert modeling.

Characteristics of observers

Results of several studies employing a learning analysis of modeling (Bandura, Grusec, & Menlove, 1966; Grusec & Brinker, 1972; Maccoby & Wilson, 1957) disclose that observer characteristics can serve as determinants of observational learning. The extent to which modeled patterns are reproduced is significantly influenced by observer characteristics such as dependency (Jakubczak & Walters, 1959; Kagan & Mussen, 1956; Ross, 1966), self-esteem (de Charms & Rosenbaum, 1960; Gelfand, 1962; Lesser & Abelson, 1959), level of competence (Kanareff & Lanzetta, 1960), and socioeconomic and racial status (Beyer & May, 1968), and countless studies have shown that the effects of modeling stimuli are partly determined by the sex of the observers (e.g. Grusec & Brinker, 1972; Maccoby & Wilson, 1957; O'Sullivan, Gilner, & Krinski, 1973). Finally, motivational variables and transitory emotional arousal significantly alter perceptual thresholds and in other ways facilitate, impede, and channel observing responses (Bandura & Rosenthal, 1966; Easterbrook, 1959; Kausler & Trapp, 1960).

Thus, it is difficult to evaluate from performance measures alone whether the effects of observer characteristics reflect differences in degree of observational learning or in willingness to perform what has been learned.

C. Role-playing

Following Lazarus' (1965) suggestion, the term behavior rehearsal

is often used by others to refer to the use of role-playing techniques in behavior therapy (McFall & Marston, 1970).

Behavior rehearsal (role-playing) appears to be one of the most promising, yet least studied of the available behavior therapy approaches (Bandura, 1965; Ullman & Krasner, 1965). Results of a study by Lazarus (1966), as well as available evidence from another clinical case-study and anecdotal reports (Cautela, 1966; Kelly, 1955; Wolpe & Lazarus, 1966), suggest that behavior rehearsal is indeed a potentially effective treatment technique, and they indicate the need for more controlled research (McFall & Marston, 1970).

The reasons for the paucity of systematic research on behavior rehearsal are not entirely clear, but McFall and Marston (1970) offer some possible factors. First, the behavior rehearsal treatment procedure, as typically described, appears to be complex, unsystematic, and unstandardized, relative to other behavior therapy techniques. For example, when employing behavior rehearsal in assertive training (Wolpe & Lazarus, 1966) any combination of a number of treatment variables may be involved, including both modeling and role-playing. Second, the behavior rehearsal technique is typically applied to behavior classes that lack sufficient definition or specificity. Third, it is difficult to obtain satisfactorily reliable and objective laboratory and/or real-life measures of the behaviors typically treated with behavior rehearsal.

McFall and Marston (1970) suggest that a successful experimental investigation of behavior rehearsal therapy (role-playing) will partly depend upon the development of a standardized treatment procedure. Of particular interest to the present study is a procedure outlined by

Friedman (1972). According to Friedman (1972), during role-playing procedures the subject typically passes through three phases. First, the subject encounters stimuli that resemble but are markedly different from the stimuli he will encounter in the assessment situation. Secondly, he is instructed to act as if he were actually engaging in that specified set of behaviors (or as another person engaging in them). One major dimension along which the role-playing procedures can vary here is the amount of improvised behavior by the subject and the amount of guidance (coaching) to his behavior. Thus at one extreme the subject can be provided minimal cues or prompts and must improvise his responses, and at the other extreme the subject can be instructed exactly what to do, and rehearses these behaviors. And thirdly, he usually is immediately exposed to very threatening stimuli rather than being gradually exposed to them.

In the present study, the subjects received directed coaching, i.e., they were instructed how to respond appropriately in the rehearsal (assessment) situations, and they practiced or rehearsed these responses.

D. Modeling plus Role-playing

The major difference between role-playing procedures and modeling procedures for behavior change is that the subject is usually required to participate actively in overt verbal and gestural behavior during role-playing and not during modeling (Friedman, 1972). When subjects do engage in overt verbal or gestural behavior during modeling, their performance is enhanced (Bandura et al., 1966; Bandura, Jeffery, & Wright, 1964; Berger, 1966; Gittelman, 1965; McDonald & Allen, 1967).

On the other hand, Friedman (1971) found that repetitive rehearsal of verbal behavior enhanced the self-assertive performance of his subjects, but that the rehearsal did not have to be overt. His results suggest that an ongoing, covert rehearsal of verbal responses is sufficient for changes in verbal behavior.

Friedman (1971) has summarized his interpretation by suggesting that when modeling and role-playing are combined, the subject has available to him (1) information that evokes response rehearsal, (2) a variety of externally presented visual and vocal cues that provide him with covert cognitive-perceptual images which serve as internal cues for his behavior, and (3) a repertoire of overtly rehearsed responses to emit in the presence of these internal cues. He hypothesized that the combination of these mediating variables produces the greatest increase in behavior change.

E. Assertive Training

Bandura (1973) suggests that a submissive person needs to develop assertive responses that enable him to control his social environment in ways that stop humiliating treatment. Assertive training as a method for directly shaping assertive responses has received considerable attention in the behavior therapy literature (e.g. Salter, 1949; Wolpe, 1958, 1969, 1970; Wolpe & Lazarus, 1966). In recent studies (Eisler, Hersen, & Miller, 1973; Friedman, 1971; Hersen, Eisler, & Miller, 1973; McFall & Lillesand, 1971; McFall & Marston, 1970; Rathus, 1972), an effort has been made to identify the effective components in assertive training. In all cases, treatment using either behavior rehearsal, performance feedback, modeling, role-playing, and instruc-

tion produced superior results to control procedures on assertive measures.

Apparently, assertive responding requires the coordinated delivery of numerous verbal and nonverbal responses (Eisler, Hersen, Miller, & Blanchard, 1975; Sansbury, 1974). Results of the study by Eisler et al. (1975) not only demonstrated the behavioral complexity of what is commonly referred to as "assertiveness," but also supported a stimulus-specific theory of assertiveness. "That is, an individual who is assertive in one interpersonal context may not be assertive in a different interpersonal environment" (Eisler et al., 1975, p. 339).

F. Modeling in Assertive Training

Modeling principles can be applied to teach people how to behave assertively (Bandura, 1973), and indeed are used favorably in the treatment of assertive behavior deficits (Bergin & Suinn, 1975). Modeling in fact has been employed as an effective therapeutic technique to alter nonassertive behavior in adults, hospitalized patients, and college students (Eisler, Hersen, & Miller, 1973; Friedman, 1971; Goldstein, Martens, Hubben, Van Belle, Schaaf, Wiersma, & Goedhart, 1973; Kazdin, 1974; McFall & Lillesand, 1971; Young, Rimm, & Kennedy, 1973). Different types of modeling which have been included as part of treatment for developing assertiveness have been live (Friedman, 1971), film-videotape (Eisler, Hersen, & Miller, 1973; Rathus, 1973) and audio (tape-recorded) models (Goldstein et al., 1973; McFall & Lillesand, 1971).

Young et al. (1973), using undergraduate women, discovered modeling alone to significantly increase assertiveness as compared

with pseudotherapy or no treatment. Reinforcement added to modeling did not appear to make a substantial contribution. Rathus (1973) used videotapes with models discussing assertive behaviors and then displaying them. Subjects showed increase in assertive behaviors, but their social fears remained unchanged. Kazdin (1974) investigated the effect of covert modeling in developing assertive behavior. Forty-five non-assertive subjects (17 to 52 years of age) received covert modeling (imagined scenes in which a model performed assertively), covert modeling plus reinforcement (imagined scenes in which a model performed assertively and favorable consequences followed model performance), no modeling (imagined scenes with neither an assertive model nor favorable consequences), or delayed treatment. The results indicated that the modeling-reinforcement group tended to show greater assertiveness at post-treatment assessment and follow-up (up to three months) than the other groups. Kazdin's (1974) study, however, provided no evidence for generalization of behavior change outside of the treatment setting. There was generalization of performance gains within the laboratory setting, namely, to novel role-playing situations on the behavior test. He concludes, then, that the development of non-laboratory assessment procedures is essential to ensure that treatment effects transfer. Results of a study by Eisler, Hersen, and Miller (1973) indicated that observation of a videotaped model facilitated acquisition of responses on five of eight components of assertiveness to specific situations in psychiatric patients. By contrast, patients who merely practiced their own behavioral repertoires (no coaching or role-playing) did not improve in assertiveness. This result suggests that in cases where response deficits exist, repeated exposure to the difficult situation alone

does not change the behavior. This is in apparent contrast to the results reported by McFall and Marston (1970) where behavioral rehearsal without performance feedback increased assertiveness. This discrepancy could well be due to the different procedural approaches to the "practice" treatment.

G. Role-playing in Assertive Training

Role-playing (or behavior rehearsal) has also been used to treat nonassertive behavior, and in fact is one of the major techniques used during the typical course of assertive training (Lazarus, 1966). It may be used to inhibit maladaptive surplus behaviors such as aggressiveness, competitiveness, and jealousy (Casey, 1973), or it may be used to express one's feelings of resentment to personal slights and unfairness (Wolpe & Lazarus, 1966; Wolpe, 1969, 1973).

Hedquist and Weinhold (1970) found a behavior rehearsal group to emit more assertive verbal responses than a placebo control group. McFall and Marston (1970) found a nonsignificant tendency for behavior rehearsal with feedback to be better than without feedback, using an unobtrusive assertive test. Results of another study by Aiduk (1972), comparing treatments consisting of behavior rehearsal alone, behavior rehearsal and videotape feedback, and behavior rehearsal with videotape feedback and systematic self-evaluation, showed that the assertion training techniques produced significant positive change in assertive behavior. All trained subjects improved significantly more than control subjects; however, the differences between treatment groups failed to achieve significance. Finally, Eisler et al. (1975) using role-playing, also obtained significant differences on the majority of verbal and nonverbal component behaviors related to assertion between

high- and low-assertive subjects. In general, high-assertive subjects tended to talk longer, with greater affect and speech volume, while smiling less frequently than low-assertive subjects.

H. Modeling and Role-playing in Assertive Training

Eisler, Hersen, and Miller (1973) concluded from their study that it seems reasonable to expect that modeling used in conjunction with other techniques (such as coaching or feedback) would lead to changes in behaviors unaffected by modeling alone. As described in the literature below, however, the results are quite inconclusive.

Friedman (1972) compared the effectiveness of different forms of modeling with and without guided practice (directed role-playing) for increasing assertive behavior in passive college students. Behavioral modeling supplemented with guided practice proved to be the most powerful treatment; it produced approximately a triple increase in assertive behavior. The results of a study by Snyder (1972) testing the relative efficacy of behavior rehearsal, modeling, and silent reading eliciting assertive behavior, also demonstrated clear superiority of all treatment methods over the control, but no significant differences between treatments. According to Snyder (1972), this result is compatible with some earlier studies (e.g. Friedman's [1971] study, showing that a role-playing condition in which subjects overtly rehearsed assertive responses was no more effective than a modeling or assertive script reading condition in changing behavior).

McFall and his colleagues (McFall & Lillesand, 1971; McFall & Marston, 1970) have used a standardized, semi-automated procedure to demonstrate that through verbal modeling and therapist coaching it is

possible to increase subject refusal of unreasonable requests. Covert rehearsal combined with other procedures (audio modeling, coaching, overt practice) enhanced assertive behavior (McFall & Lillesand, 1971). On the other hand, McFall and Twentyman (1973) conducted a series of four experiments involving as many as ninety college students to determine the relative contributions of modeling, rehearsal, and coaching to assertive training. Behavioral rehearsal seemed to be the most important variable in effective change, with modeling adding little when combined with rehearsal. This held regardless of the media used: video versus audio only. Finally, overt and covert rehearsal appeared to be equally effective. These conclusions, however, are confounded by the fact that instructional procedures, such as coaching, may merely be a special form of modeling (Bandura, 1971). The coaching here consisted of prerecorded statements such as, "The best way to handle a situation like this is to be polite, but firm." McFall and Twentyman (1973) hypothesized that coaching provided training in cue discrimination and served an instigative function (Bandura would label it an informative function). Moreover, they did not investigate whether the presentation of modeling alone, without either rehearsal or coaching, would have had a significant effect relative to an untreated control group; thus, any theoretical conclusions are unwarranted.

Parr (1974) investigated this problem with Grade 8 and 9 non-assertive students. His treatment groups consisted of modeling, behavior rehearsal, modeling plus behavioral rehearsal, placebo control or script counseling, and delayed-treatment control. Findings of this study did not provide a definitive answer to the question of how modeling and rehearsal contribute to treatment effect in assertive

counseling, but the results tended to suggest that modeling plus rehearsal may contribute additively to treatment, and that modeling and rehearsal alone may be equally effective in assertive counseling.

Results of a study by Perkins (1972), investigating the relative efficacy of assertive training, modeling, and assertive training plus modeling, indicated that neither of these three short-term treatment procedures was effective in producing a change in the dependent variable of assertiveness. The treatment procedures also failed to produce a difference in increased assertiveness between male and female subjects or between single-sex groups and mixed-sex groups. Problems mentioned in this study included motivation, length, and number of treatment periods.

Conclusions drawn from Snyder's (1972) study, which could also be drawn from the other studies, indicate that: (1) assertive training, whatever the mode and even when experimentally controlled, can lead to generalization to similar situations; (2) training, whatever the mode, consistently shows some effect over "no training" even if there are only a few trials; and (3) with only one or two trials, individual modes of training do not seem to differ in their power to elicit the desired behavior--initially, all seem to transmit sufficient cues to elicit the desired behaviors. This author would add a fourth conclusion: (4) combining modes of treatment in terms of greater efficacy seems to yield inconclusive results. Whatever the case may be, however, many investigators (Eisler, Hersen, & Miller, 1973; McFall & Marston, 1970; McFall & Twentyman, 1973) do suggest that the relative contribution of certain individual treatments, namely performance feedback, instructions (coaching), rehearsal, and exposure to a model in assertive training **still** requires further research.

CHAPTER III

Methodology and Design

A. Sample

The subjects for the study were randomly selected from among all those Grade 6 pupils in three local schools in the Edmonton Public School System whose parents granted permission to participate in the study. Parents of the children selected for the experiment were sent a letter explaining the study and asking for permission, approximately one month before the study was to take place (Appendix A). The return rate was approximately 70%. From the list of "yes" responses, 72 subjects were randomly selected (36 boys and 36 girls). One boy and one girl were later removed for purposes of analysis (see Chapter IV). The ages of the remaining subjects ranged from 10 years, 9 months to 13 years, 9 months (mean 11 years, 11 months) at the time of the experiment (which was in early Spring). Grade 6 was chosen for the sample since it is the last grade in elementary school when most children perhaps begin to experience "anxieties" associated with entering junior high school together with the onset of puberty.

In order to ensure that the sample was representative of the respective population (i.e., children in Grade 6 in Edmonton), the criterion of socio-economic status was used. The Blishen (1968) occupational rank scale was used to calculate the socio-economic status. This scale, which was constructed using weightings based on the number of years of career training and the responsibility required by the occupation, correlates highly with other measures of socio-economic status (Elley, 1961). The mean occupational rating on

the Blishen Scale is 50--the standard deviation is 10.

Elley (1961, pp. 69-70) found a mean of 51.63 and a standard deviation of 9.35 in a random selection of 400 Edmontonians. Davies (1970, p. 31) found a mean of 50.97 and a standard deviation of 9.04 in a representative sample of 113 Edmontonians. Eley (1971, p. 26) found a mean of 52.65 and a standard deviation of 20.28 in his random sample of 128 Edmontonians. Finally, Cebuliak (1973, p. 45) found a mean of 43.58 and a standard deviation of 15.91 in his sample of 77 Edmontonians. The results of these local studies would suggest that the Blishen Scale is a reliable measure of socio-economic status.

In this study the occupation of the children's fathers (mothers in cases where no father was present) was used to calculate the socio-economic index. Fathers' occupations were ascertained by querying each child after the experiment.

It was found that the mean Blishen socio-economic index for 68 subjects (occupations of two fathers were unavailable) was 46.71, while the standard deviation was 16.99. This sample was interpreted as being fairly representative of the population. The mean socio-economic index was slightly lower than that of Blishen's Scale, but not significantly so.

B. Research Design

A posttest-only control group design was used. This design was selected in an attempt to control for the possibility of task learning through pre-testing (Campbell & Stanely, 1966). Subjects were randomly selected from the population of students used and randomly assigned to four treatment conditions (approximately 18 per group

depending on the number of students available from each school).
(Table 1).

Table 1
Assignment of Subjects
to Treatment Group by School

Group	School			N
	1	2	3	
I	6	6	6	18
II	6	6	6	18
III	6	6	5	17
IV	12 (6+6)	5	2	19
Total	30	23	19	72

A minimum of 24 subjects were required from each school to form 4 groups of six, but Table 1 shows that two of the three schools only allowed for control groups (Group IV) of five and two subjects respectively. The third school provided sufficient subjects for two control groups (of six subjects each); thus, there was a total of 19 subjects in the control group.

To test the equivalence of these groups, the criteria of mean socio-economic index, age and sex were used. It can be seen from Tables 2, 3, and 4 that the groups indeed did not differ significantly from each other with respect to these criterion measures.

Table 2
Means, Standard Deviations and Analysis of Variance for
Blisken Socio-Economic Index of Subjects

Group	N	Mean Blisken Index	Standard Deviation
I	16	44.61	17.42
II	17	49.21	18.41
III	17	50.75	19.43
IV	18	42.39	12.70
Total	68	46.71	16.99

Analysis of Variance

Source	df	MS	F	P
Groups	3	228.47	0.745	0.53
Error	52	306.70		

Table 3
Means, Standard Deviations and Analysis of Variance for
Distribution of Subjects By Age (in years)

Group	N	Mean Age (in years)	Standard Deviation
I	17	12.02	0.48
II	17	11.84	0.51
III	17	11.88	0.61
IV	19	11.88	0.59
Total	70	11.91	0.54

Analysis of Variance

Source	df	MS	F	P
Groups	3	8.968	0.287	0.83
Error	54	31.250		

Table 4
Distribution of Subjects By Sex and Analysis of
Variance Between Groups

Group	Total N	N of Males	N of Females
I	17	10	7
II	17	7	10
III	17	8	9
IV	19	10	9
Total	70	35	35

Analysis of Variance

Source	df	MS	F	P
Groups	3	0.093	0.360	0.79
Error	66	0.261		

Note: 1 = male

2 = female

To summarize the constitution of the groups, it can be said that they were not different with respect to socio-economic status, age, and sex. In general, the sample is representative of a slightly below-average income group of Edmontonian children with a mean age of 11 years and 11 months.

C. Preparation of the Modeling Videotape¹

Two adult models and two peer models were selected (1 man, 1 woman, 1 boy, 1 girl). The 2 peer models and peer role-players were Grade 6 children from another school, selected on the basis of teachers' reports of who in their classes seem to be the best actors and actresses. All 4 models were instructed in some of the specific behaviors which were found to be related to judgments of overall assertiveness in a study by Eisler, Miller, and Hersen (1973). These behaviors include duration of responses, face-to-face contact, content requesting new behavior, and loudness of speech. In addition Eisler, Hersen, and Agras (1973a, b) found affect (tone of voice) to be a reliable indicator of assertiveness.

A series of 8 assertive stimulus situations were presented to both models and role-players (see page 32). The role-players and models were trained to react to each other's responses such that it was a rewarding outcome. They practiced their responses until the models exhibited a sufficiently high degree of assertive behaviors. The role-playing scenes were then videotaped so that all subjects in modeling groups would be exposed to the same modeled behavior.

To control for sex effects of the models, two scenes were videotaped using male models and male role-players, two scenes using male

models and female role-players, two scenes using female models and male role-players, and two scenes using female models and female role-players. The tape consists of a title for each scene, a brief narration, and the action. The total time of actual action is approximately 13 minutes (scenes range from 1 to 1 3/4 min.; mean about 1 min. 35 secs.).

The eight stimulus situations in order of presentation are:

- a. The lunch room: boy squeezing in line in front of another boy at a Coke machine;
- b. The movies: man cutting in front of another man in a movie line;
- c. The gym: girl losing her basketball to a boy on the gym court;
- d. The concert: man taking a lady's seat at a concert;
- e. The school hallway: girl wanting to copy another girl's math homework before class;
- f. The bookstore: lady being short-changed by a lady clerk in a bookstore;
- g. The library: girl talking loudly and disturbing a boy in the library;
- h. The restaurant: waitress bringing a man a sandwich instead of the steak he ordered.

The following is an example of the narration and verbal exchanges in one of the situations:

The Lunch Room

Tony is having lunch at his school lunch room. He's getting thirsty, and realizes he doesn't have anything to drink with his lunch. He looks at the Coke machine, and sees the long line-up in front of it.

He leaves the table to go over to buy a nice, cold pop.

He's in a hurry because he has to leave soon, but since there's a long line-up in front of him he has to wait. As he's waiting in line, this other student comes along and squeezes in line in front of him, without asking.

Model: Hey Rob, this is a line and I was here before you. Could you please go to the back of the "bus?"

Rob (pointing to the girl ahead of him): But I thought she was at the end of the line.

Model: No she wasn't. I was here before you. I've been here for quite awhile now.

Rob: Well there's lots of people ahead of us. One person doesn't matter. Mind if I cut in?

Model: Yes I do mind. It's not fair you know. I'm quite thirsty and I am in a rush.

Rob: C'mon, you're my friend.

Model: Well it doesn't matter Robert. There's other people waiting longer than you. Same with me.

Rob: I'm thirsty!

Model: Sorry. You'll have to go to the back of the "bus."

Rob: O.K. (and goes to the end of the line).

D. Pilot Study

A pilot study was conducted to ascertain the most effective program of research. The effectiveness of the modeling videotape, the exact treatment procedures, the sensitivity of certain dependent variables, and the one test situation most effective in evoking these outcome measures and detecting differences across the groups were investigated.

The results of this pilot investigation indicated that observation of the modeling videotape facilitated acquisition of assertive responses in two specific test situations in Grade 6 elementary school children. Modeling effected changes in three of the seven components of assertiveness chosen for the study, including the global judgment of overall assertiveness. In addition, the Modeling groups more often exhibited assertive behavior in the specific discrete response situations. While the children received only one exposure to the modeling tape (15 minutes), it is interesting to note that such a brief exposure time was indeed very effective.

Findings particularly relevant to this study included: (a) the modeling videotape should be effective; (b) outcome measures such as affect (tone of voice), loudness of voice, and overall assertiveness discriminated well between groups and served as reliable measures of assertiveness; (c) the rating scale was effective and sensitive in allowing the judges to measure the necessary variables; and (d) improved procedural arrangements for the one best "test" situation were discovered.

E. Nature of the Treatments

Each treatment package lasted a total of 15 minutes (arbitrarily defined to be the "brief exposure time to treatment"). In order to hold the time variable constant across treatments, it was necessary to modify and break up certain components within each package.

Group I -- modeling (MOD) package

All subjects in Group I were shown the modeling tape in groups of six. Before presentation of the videotape to the subjects, live

instructions and an introduction were given: "You are going to see some short scenes where two people at a time are interacting with each other. These scenes are examples of situations that could happen to anybody, anywhere. The boys and girls that you will be seeing in the film are just like you. They are also in Grade 6 but from another school. The men and women in the film could be like your parents, your teachers, any other adults you know, or perhaps even you when you grow up. Listen and watch carefully what happens each time. Notice especially how one person acts to get his or her way."

Following these verbal instructions, the videotape was shown. After it had ended, subjects were later individually escorted to the test situation.

Group II -- directed role-playing (DR) package

All subjects in Group II and in groups of six were presented with any 1 of the above 4 peer stimulus situations (chosen at random for each group over the three experimental days). The basic instructions used here were -- "You are going to be presented with an example of a situation involving two students that could happen to anybody, anywhere. The idea is for you to act out the situation just as if you were in it at home, in school, or wherever. First I will assign you each a partner. Then I will describe the scene to you, and I want you to imagine that you are really there. I will give one of you (in each couple) a comment or remark to start the interaction. After your partner speaks to you, I want each of you in turn to respond to your partner as you would normally if you were actually in the situation. Each pair will have a turn. Do you have any questions?"

The scene was described, then role-playing carried on for a minute or two for each couple, switching roles. Thus each couple was allowed to act out the situation without prior coaching. This was designed simply as a practice session. Then the adult role-player said (coaching): "That was O.K., but try and do better this time. Make sure you talk long enough so that your partner understands what you mean. Look at him/her when you talk. Tell him/her what you expect him/her to do. Also make sure you talk loudly enough and you mean what you say. Finally, tell or ask him/her a few times, not just once. For example, you could say..." (and the coach illustrated with a verbatim response from the taped script). The coach then had each couple "rehearse" the same situation and again switch roles. The subjects were later individually escorted to the test situation.

Group III -- modeling plus directed role-playing (MOD + DR)
package

All subjects in Group III were treated in groups of six (one group of five). The videotape employed here was the same as that used in the Group I treatment package, except only 1 of the 4 peer scenes (the same for Group II chosen at random for each group over 3 days) was presented. The same instructions as in Group II were also used here. Following the instructions and the verbal description of the modeled situation, the adult role-player-coach asked the subjects to respond to each other in pairs. Then, after the scene was acted out the subjects received coaching on appropriate assertive responses (same as for Group II). The role-player-coach then introduced the modeling tape and showed the corresponding videotaped scene to the subjects who were told that this is how the acting should be done.

(Role-playing was carried out before the modeling to allow the subjects to practice their own responses first. Thus, while receiving the coaching and then viewing the videotape, they could reflect upon their previous behavior and how they might improve it). Following exposure to this modeled stimulus situation, the coach reviewed the skills once more and then asked the subjects to switch roles and role-play again for a minute or two. The subjects were later individually escorted to the test situation.

Group IV -- no-treatment control (CONT)

All subjects in Group IV were shown an 11 minute videotape film called "Love," which was related to mental health and guidance, but unrelated to assertive behavior, in groups of two, five, and six (depending on the number of students available at each particular school). The film depicted two high school students "in love" working towards the conclusion that getting married at their age was something they could not afford to do. Subjects were simply told to watch the TV monitor carefully for about the next 15 minutes. After the film had ended, they were later individually escorted to the test situation.

Summary of Treatment Packages

MOD Group I -- group (6): videotape presentation of 8 scenes -- no overt rehearsal; no coaching.

DR Group II -- group (6): verbal presentation only of 1 scene -- overt rehearsal 4 times (per pair); coaching once.

MOD + DR Group III -- group (6): verbal and videotape presentation of 1 scene -- overt rehearsal twice (per pair); coaching once.

CONT Group IV -- group: video/film presentation -- 0 scenes -- no overt rehearsal; no coaching.

F. Experimental Setting and Procedure

The subjects were treated and tested in their respective schools. On each of the three days of the experiment, the children were gathered from their classrooms in their respective groups and brought to a separate room where the experiment took place. Subjects in Groups I and IV viewed either the modeling or the control film. Subjects in Groups II and III were taken to the same area where they received either directed role-playing or modeling plus directed role-playing. To counter balance any ordering effect for the time of day of presentation of each treatment package, for each day of the experiment treatment groups were assigned an order such that no two identical treatments occurred at the same time of day.

Testing procedure

After presentation of the film or the prescribed treatment, another experimenter (a female graduate student) entered the room and explained to the group of subjects (Appendix B) that she was interested in studying and comparing Grade 6 and 7 students' performance on working on a written maze puzzle. They would only have up to 3 minutes to do the task. While they were waiting their turns, a practice maze (Appendix C) was handed out for them to try.

After practicing on the maze, each subject was taken individually by the female experimenter to the "test room" (usually the school medical room). All subjects were tested anywhere from two minutes to one half hour after the treatment (for all groups, subjects were selected randomly for their specific testing times). Also, each subject received the identical test situation (to standardize the effects, only one was used).

The test situation consisted of a direct intentional incident between the subject and "the other" in which the subject was required to demonstrate some assertive skills in order to overcome some interference and complete a task. Furthermore, it was necessary to keep the subject unaware of the fact that he indeed was being tested for assertion; i.e., he could not know he was now being "tested" (else he would try to perform as expected by the investigator). Moreover, the subject could not be aware of the videotaping procedure (as this could increase test anxiety and perhaps lead the subject to guess the test purpose). To this end, a concealed videotaping unit was set up in the "test room." This unit consisted of a camera, a microphone and a videotape-recording machine concealed within a 5 foot wooden box constructed specifically for the purpose of unobtrusive video recording in the classroom, the home, or wherever. The camera, resting in the upper of two compartments, peers through a peep-hole in the box and records through the video-recording machine to which it is connected, the situation or area at which it is directed. The box is soundproofed so that no noise can be heard from the machines.

The subject was met at the "test room" by either a male or a female Grade 7 Confederate student who alternated for each successive test situation. The experimenter seated both the subject and the Confederate at a large desk, and handed out the test mazes (Appendix D) with the pencils. She gave the subject a pencil with an eraser, and to the Confederate she gave one without the eraser. She then read the directions to both of them. As the experimenter was about to leave the room, she reminded the "subjects" that they had only 3 minutes and must hurry.

After the experimenter left, the Confederate worked on the maze for about 30 seconds and then intentionally made an error on his puzzle. He turned to the subject and asked if he could borrow the subject's pencil/eraser "for a second." If the subject refused, the Confederate was to persist three times (this situation never occurred). If the subject did lend the pencil/eraser, the Confederate used it for 15 seconds, but did not return it (he instead used the pencil himself). The subject therefore had to assert himself/herself to get the pencil back to finish the task. In order to get information on the question of persistence (see section G) the Confederate was instructed to resist the first two requests and to comply only upon the third request.

All behaviors in the test situation were recorded on videotape for later judging. Subjects' responses were videotaped to permit judges to respond to visual as well as audio cues in making behavioral ratings.

Interview and questionnaire

Immediately after the test situation, each subject was interviewed to obtain his feelings about the test and to determine if he was aware of the true purpose of the study. First he was asked how he felt about what happened during the test, as well as how he felt about the boy/girl with him. This question was followed by, "Was there anything more to the test than what you were first told? Was there more to it than just doing a maze?"

In addition, a questionnaire was administered orally to each subject (Appendix E). The questionnaire was administered to determine whether the children were aware of the norms of appropriate assertive behavior in similar situations where they might be called upon to stand

up for their rights, regardless of whether or not they themselves had displayed assertive behavior in the experiment. It was assumed that their choice of response would indicate what they "ought" to do. A second purpose was to determine whether there was an acquisition versus performance difference between and among the groups (i.e., whether the treatment groups differed significantly from the control group, and whether there were differences among treatment groups). Perhaps the treatment subjects "acquired" the necessary skills, but failed to "perform" them in the test situation. Following completion of the questionnaire, each subject was explained the true purpose of the study, was asked to maintain secrecy for the rest of the day, and was then sent back to his classroom.

Summary of Experimental Procedure

Each procedure taking place in the setting explained above lasted approximately (1) treatment -- 15 minutes

(2) escort to test room -- 1 minute

(3) test period -- 3 minutes

(4) interview and questionnaire -- 3 minutes

G. Outcome Measures

Eisler, Hersen, and Agras (1973a, b) found that assertive psychiatric patients exhibited shorter response latencies (time taken to respond), louder speech, longer speech duration, greater affect (tone of voice), less compliance, and more requests for changes in the behavior of the interpersonal partner than unassertive patients. Eisler, Hersen, and Miller (1973) found similar results in another study, with overall assertiveness also being a reliable measure.

Sansbury (1974) adds to these eye-contact, body posture and hand movements as other components of assertive behavior. Serber (1972) similarly elucidates six physical components in assertive behavior -- loudness of voice, fluency of spoken words, eye-contact, facial expression, body expression and distance from the other. Wolpe (1973) suggests that in assertive training, it is necessary to take into account not only the words used, but also the loudness, firmness, and emotional expressiveness of voice, and the appropriateness of accompanying bodily movements. Casey (1973) agrees that what one says to another and how he says it (inflection, rate, hesitation, firmness, and so on) is a potent control source in social interaction.

In the pilot study, the general verbal and non-verbal components of assertive behavior used to measure assertiveness were latency of response, duration of response, total time to get pencil back, eye-contact, appropriate affect (tone of voice), loudness of voice, and overall assertiveness. The more specific, discrete response measure was simply the success or failure of the subject in keeping the pencil/eraser or getting it back. The results showed that certain outcome measures were more sensitive and useful in indicating assertive behavior than others. The specific response measures, plus affect, loudness and overall assertiveness were highly sensitive in discriminating between the treatment and the control groups (and in addition all three judges rated very reliably here). Eye-contact, however, did not discriminate well between the groups. This may be due to a natural tendency for all children to keep face-to-face contact while speaking. Thus, there was some question of the validity in using eye-contact or face-contact as an appropriate indicator of assertive

behavior in children and it was dropped as an outcome measure for the main study.

Although the "time" measures (latency, duration and total time) showed no significant differences between groups, it was noted that they did approach significance at the .05 level. One problem in the pilot may have arisen because of the inconsistency of times used by the Confederate to erase (ranging from 15 to 60 seconds). Related to this, it was observed that some subjects waited for the Confederate to finish using the eraser until they asked for their pencil back. In the main study, both Confederates erased for only 15 seconds. A second issue with these measures in the pilot study was the fact that some subjects ran out of time, i.e., the three minute time limit was up before they could get their pencil back. In these cases, it was decided to exclude the scores from the analysis (in the pilot study) since including them would indicate that the pencil had indeed been given back at that time, which was clearly not the case. Exclusion of these scores thus tended to lower the mean values for these measures, perhaps removing some significant difference at the same time (since the excluded scores were very high). Thus it was decided to retain the count up to the time limit in the analyses for the present study.

The behavioral components of assertiveness chosen for this study were defined to the judges as follows:

1. latency of response: Length of time (in seconds) beginning from when the subject gives the Confederate his pencil/eraser until the subject first asks for it back.
2. duration of response: Length of time (in seconds) beginning

from when the subject first asks for his pencil/eraser back until the subject actually gets it back.

3. total time: Length of time (in seconds) it takes the subject to get his pencil/eraser back (after giving it up). Total time (in seconds) is computed by adding together latency of response time and duration of response time.

4. number of requests: Simply the number of times the subject asks for his pencil back (a measure of persistence).

5. keeps eraser or gets it back: Simply the success or failure of the subject in keeping his pencil/eraser or getting it back (the specific response).

6. appropriate affect: Tone of the subject's speech/voice was rated on a five-point scale from 1 (very flat, unemotional) to 5 (a full and live intonation appropriate to the situation).

7. loudness of voice: Loudness of the subject's speech/voice was rated on a five-point scale from 1 (very low) to 5 (appropriate voice level to the situation).

8. overall assertiveness: After rating all the previous behavioral categories, the judges were asked to read descriptions of assertive behavior in Wolpe and Lazarus (1966, pp. 38-53). They were then asked to rate all videotape scenes for overall assertiveness on a five-point scale, with 1 indicating very unassertive and 5 indicating very assertive.

Thus greater assertive behavior would be associated with shorter response latencies, shorter response time, less total time, more requests, greater affect, louder speech, greater overall assertiveness, and getting the pencil back.

Behavioral ratings

All behavioral ratings were made independently by three judges who observed replays of the videotaped test situations in random order. Judges were given an explanation of the study (Appendix F), but were blind to the treatment groups.

The rating scale used by the judges appears in Appendix G . Each judge had several hours of practice in rating the behavioral measures (from the pilot study). Inter-judge reliability on these measures in the pilot study ranged from .920 to .999.

All responses had to be assertive, but non-aggressive. (Judges were trained to recognize the difference between assertion and aggression. They read certain descriptions differentiating both [in Wolpe & Lazarus, 1966, pp. 38-53], looked at Chittenden's [1942] rating scale distinguishing between the two [Appendix H], and studied Wolpe's [1973] diagrammatic conceptualization [Appendix H]).

Scoring

Specific response was scored as 1 or 0. For all other measures the subject's score was obtained by taking the raw value of the various measures. Mean scores were then used to measure differences between the groups for each particular measure, except for the tallied (specific) response which was compared using composite group scores.

Reliability of behavioral measures

Three judges were used to assess interrater reliability (the same three judges as were used in the pilot study). Percentage of agreement for keeps pencil/eraser or gets it back was computed by dividing total number of interjudge agreements by total number of

agreements and disagreements. For all other measures, an analysis of variance with repeated measures was computed to determine interjudge reliability.

H. Hypotheses

The hypotheses, based on the various outcome measures, were as follows:

I. There would be no differences in scores between the treatment groups and the control group with respect to getting the pencil/eraser back

II. There would be no differences in scores between the treatment groups and the control group with respect to the "time" measures, namely latency of response, duration of response, and total time to get the pencil/eraser back.

III. There would be no differences in scores between the treatment groups and the control group with respect to number of requests.

IV. There would be no differences in scores between the treatment groups and the control group with respect to both affect (tone of voice) and loudness (speech volume).

V. There would be no differences in scores between the treatment groups and the control group with respect to the global measure of overall assertiveness.

In each case, it was also hypothesized that there would be no differences between the three treatment packages, the combined modeling and role-playing treatment package being as effective as either the modeling or role-playing treatment packages alone.

CHAPTER IV

Results and Discussion

Seventy-two subjects were originally selected to participate in the study. During the experiment, however, one boy (from the DR group) and one girl (from the MOD group) found an extra pencil to use in the test situation, and thus had to be excluded from the following analyses. Consequently, the modeling, the directed role-playing, the modeling plus directed role-playing, and the control groups were left with 17, 17, 17, and 19 subjects, respectively.

The data accumulated in the post-treatment test were subjected to the statistical analyses described below (Section A) to ascertain the tenability of the major hypotheses that: 1) there would be no significant differences between the treatment groups and the control group on any of the outcome measures; and 2) there would be no differences between the treatment groups. Since the literature suggests that the treatments should be more effective than no-treatment, a one-tailed test was used for each variable in the case of the first major hypothesis. On the other hand, a two-tailed test was employed for the second major hypothesis.

Since three judges were involved in the rating of the behaviors, it was necessary to examine the amount of agreement before any analyses could be carried out. Interrater reliabilities for all eight measures are presented in Table 5. Uniformly high reliabilities were obtained in each case, all but two measuring above 0.900. The range of values was very similar to that obtained in the earlier research.

Table 5
Adjusted^a Reliabilities of Judges
on Behavioral Ratings

Measure	R_1^b	R_k^c	% Agreement
Keeps pencil/eraser or gets it back			100.00
Latency of response	0.999	0.999	
Duration of response	0.999	0.999	
Total time	0.999	0.999	
Number of requests	0.989	0.996	
Affect	0.849	0.944	
Loudness	0.779	0.914	
Overall assertiveness	0.912	0.969	

a Adjusted reliabilities remove mean differences of judges

b Single judge (R_1)

c All judges (R_k)

A. Analysis of Data

Chi square analysis (for goodness of fit) was computed for each group on the specific response measure. Expected frequencies were calculated on the basis of chance.

Due to the high reliabilities obtained among the judges, their mean scores were employed for the comparisons and analyses on each remaining target measure. Posttest means were calculated for each group and a two-way analysis of variance was performed to determine: a) whether these treatment means were significantly different; b) if there were any differences between the three schools on each particular variable; and c) if there was any interaction effect between the treatments and the schools.

A three-way analysis of variance further examined the effects of the sex of the Confederate, sex differences between groups, and interaction effects between these levels as well as with treatments.

In all cases of analyses, significance was set at the .05 level. Whenever the F-test was significant, a Scheffé Multiple Comparison of Means Test (Scheffé, 1959) was carried out. Ferguson (1971) suggests that since the Scheffé procedure is more rigorous than other procedures, and will therefore lead to fewer significant results, "...the investigator may choose to employ a less rigorous significance level in using the Scheffé procedure: that is, the .10 level may be used instead of the .05 level" (p. 271). In keeping with Ferguson's suggestion, the .10 level was used in this analysis.

Finally, Pearson product moment correlations were carried out to examine the relationships, if any, between each of the outcome measures.

B. Hypotheses and Findings

At the conclusion of the test situation, subjects were asked whether they thought there might have been more to the test than what they were first told. Only 12 out of 72 stated that they were aware of something happening other than the maze test, but were unable to describe the outcome measures.

This section includes the stated hypotheses for the measures, and a discussion of the results of the analyses as described above (Section A) for each hypothesis.

Hypothesis I

It was hypothesized that there would be no significant differences between the treatment and the control groups with respect to getting the pencil/eraser back as a result of participation in the treatment program. χ^2 analysis was computed and the values of χ^2 obtained for each group appear in Table 6.

The χ^2 values indicate that for each group no evidence exists for the rejection of the hypothesis that the observed frequencies are any greater than chance. Although the χ^2 value for the MOD group was not significant, there appears to be a strong trend in the predicted direction. The probability does approach the .05 level for a one-tailed test. Furthermore, over seventy percent of the subjects in this group got their pencil/eraser back, compared with only forty-two percent in the control group. Moreover, the MOD group seems to have performed more assertively than the other two treatment groups, although again, not significantly so.

Hypothesis II

It was postulated that there would be no significant differences

Table 6
 χ^2 Values Across Treatments for Measure:
 Gets Pencil/Eraser Back

Treatment	N	% getting pencil/eraser back	χ^2	P
MOD	17	70.59	2.88	~.09
DR	17	58.82	0.54	~.50
MOD + DR	17	58.82	0.54	~.50
CONT	19	42.11	0.48	~.50

between the treatment and the control groups with respect to the "time" measures, namely latency of response, duration of response, and total time to get the pencil/eraser back as a result of participation in the treatment program. Data were available here for only 13 of the 19 control subjects. The 6 remaining subjects could not be timed due to technical difficulties with the videotape.

Again the null hypothesis was not rejected. A summary of the analyses is presented in Tables 7, 8, and 9.

Table 7b shows that there was a significant interaction effect between treatment and school on response latency. This result indicates that one or more treatments produced a relatively better outcome in one or two of the schools than in the other. This result may perhaps be explained with respect to possible socioeconomic differences between the three schools. To test out this possibility, a one-way analysis of variance was carried out. It was found that the schools were indeed significantly different with respect to socioeconomic levels ($F = 12.25$, $df = 2/65$, $p < .0001$).

One of the three schools was located in the university area where most of the parents of the children were in a fairly high SES group. On the other hand, parents of the children in the other two schools were mostly employed in lower SES positions. It is interesting to speculate that either of these two classes of children may behave differentially in situations requiring assertive responses (including response latency). It should be noted, however, that all the subjects in each school were randomly assigned to each treatment group, making it impossible to specify exactly which schools produced the observed result.

Table 7a
Posttest Means, Standard Deviations Across Treatments for
Measure: Latency of Response

Treatment	N	$\bar{X}$	SD
MOD	17	13.80	16.13
DR	17	19.04	34.92
MOD + DR	17	22.94	33.54
CONT	13	27.61	39.33

Table 7b
Summary of Two-Way Analysis of Variance
Comparing Treatments and Schools on
Measure: Latency of Response

Source	df	MS	F	P
A (Treatment)	3	380.32	0.416	0.74
B (School)	2	887.44	0.971	0.39
AxB	6	2509.88	2.747 *	0.02
Error	52	913.74		

*Significant for a two-tailed test.

Table 7c
 Summary of Three-Way Analysis of Variance
 Comparing Treatments, Confederate Sex, and
 Subject Sex on Measure: Latency of Response

Source	df	MS	F	P
A (Treatment)	3	492.67	0.534	0.66
B (Confed Sex)	1	2121.73	2.299	0.14
C (Subject Sex)	1	2159.54	2.341	0.13
AxB	3	1136.98	1.232	0.31
BxC	1	3263.12	3.537	0.07
AxC	3	1324.37	1.436	0.24
AXBxC	3	1102.34	1.195	0.32
Error	48	922.57		

Table 8a
 Posttest Means, Standard Deviations Across Treatments for
 Measure: Duration of Response

Treatment	N	$\bar{X}$	SD
MOD	17	54.86	33.88
DR	17	57.45	44.24
MOD + DR	17	55.65	34.09
CONT	13	68.21	43.50

Table 8b
 Summary of Two-Way Analysis of Variance
 Comparing Treatments and Schools on
 Measure: Duration of Response

Source	df	MS	F	P
A (Treatment)	3	592.34	0.350	0.79
B (School)	2	1325.54	0.784	0.46
AxB	6	1044.51	0.618	0.71
Error	52	1691.00		

Table 8c
 Summary of Three-Way Analysis of Variance
 Comparing Treatments, Confederate Sex, and
 Subject Sex on Measure: Duration of Response

Source	df	MS	F	P
A (Treatment)	3	527.47	0.306	0.82
B (Confed Sex)	1	14.70	0.009	0.93
C (Subject Sex)	1	101.64	0.059	0.81
AxB	3	2243.77	1.302	0.28
BxC	1	1806.32	1.048	0.31
AxC	3	970.53	0.563	0.64
AxBxC	3	744.02	0.432	0.73
Error	48	1723.58		

Table 9a
 Posttest Means, Standard Deviations Across Treatments for
 Measure: Total Time

Treatment	N	$\bar{X}$	SD
MOD	17	68.67	41.99
DR	17	76.49	40.62
MOD + DR	17	78.59	39.92
CONT	13	95.82	35.38

Table 9b
 Summary of Two-Way Analysis of Variance
 Comparing Treatments and Schools on
 Measure: Total Time

Source	df	MS	F	P
A (Treatment)	3	1300.22	0.807	0.50
B (School)	2	4297.70	2.667	0.08
AxB	6	1378.49	0.856	0.53
Error	52	1611.31		

Table 9c
 Summary of Three-Way Analysis of Variance
 Comparing Treatments, Confederate Sex, and
 Subject Sex on Measure: Total Time

Source	df	MS	F	P
A (Treatment)	3	1852.64	1.111	0.35
B (Confed Sex)	1	2489.76	1.493	0.23
C (Subject Sex)	1	3198.45	1.918	0.17
AxB	3	2717.06	1.629	0.19
BxC	1	213.76	0.128	0.72
AxC	3	969.27	0.581	0.63
AxBxC	3	1649.36	0.986	0.41
Error	48	1667.76		

Although no significant treatment effects occurred, it is interesting to note that for all three "time" measures, the modeling group was consistently rated with higher assertive scores than the control in terms of shorter response latency, shorter response duration, and less total time. Failure to obtain significance on these measures may be due to the fairly high variation present within each of the groups.

Hypothesis III

The prediction that participation in the treatment programs would result in no difference in number of requests (greater persistence) was supported by the findings. Table 10 includes a summary of the results.

It can be seen from Table 10b that there was a significant school effect, subjects in one or two schools asking significantly more often, or perhaps less often than subjects in the other school. The explanation here is similar to that for Table 7b above.

Table 10c also shows that both the sex of the subject and the sex of the Confederate produced significant effects. Thus, not only did the male and female subjects behave differently, the boys making more requests than the girls, but the Confederates received more requests or less requests depending on their sex. There also appears to be a near significant interaction effect between the sex of the Confederate and the sex of the subject, which might indicate that the Confederates received more requests from opposite-sex rather than same-sex subjects. These results could perhaps imply that opposite sexes require more requests from each other before a response is made. It should be noted,

Table 10a
 Posttest Means, Standard Deviations Across Treatments for
 Measure: Number of Requests

Treatment	N	$\bar{X}$	SD
MOD	17	2.63	0.94
DR	17	2.18	1.14
MOD + DR	17	2.77	1.52
CONT	19	1.97	1.28

Table 10b
 Summary of Two-Way Analysis of Variance
 Comparing Treatments and Schools on
 Measure: Number of Requests

Source	df	MS	F	P
A (Treatment)	3	2.201	1.489	0.23
B (School)	2	6.118	4.139*	0.02
AxB	6	1.634	1.106	0.37
Error	58	1.478		

*Significant for a two-tailed test.

Table 10c
 Summary of Three-Way Analysis of Variance
 Comparing Treatments, Confederate Sex, and
 Subject Sex on Measure: Number of Requests

Source	df	MS	F	P
A (Treatment)	3	2.569	1.820	0.15
B (Confed Sex)	1	8.114	5.750*	0.02
C (Subject Sex)	1	7.323	5.189*	0.03
AxB	3	0.202	0.143	0.93
BxC	1	5.333	3.779	0.06
AxC	3	2.155	1.527	0.22
AxBxC	3	0.701	0.497	0.69
Error	54	1.411		

*Significant for a two-tailed test.

however, that observation of the female Confederate in the test situation indicated that she did not give up the pencil/eraser as readily as the male Confederate, even though both had been instructed to comply with the subject's third request. Consequently, some of the subjects found it necessary to make as many as five or six requests with the female Confederate.

Although there were no significant differences between the groups, it is interesting that on this measure (unlike for the "time" measures) the modeling plus directed role-playing group made more requests than did the modeling group (although the mean difference between these groups was only 0.14). The control group again made the least number of requests.

Hypothesis IV

It was hypothesized that there would be no significant differences between the treatment and the control groups with respect to both affect (tone of voice) and loudness (speech volume) as a result of participation in the treatment program. Data were available here for only 61 of the 70 subjects. Three subjects (2 in the CONT group and 1 in the MOD + DR group) never spoke or asked for their pencil/eraser back, making it impossible to obtain a measure of affect or loudness. Data from 6 other subjects (1 in the CONT group, 1 in the MOD group, and 4 in the DR group) were unavailable because of technical difficulties (sound was absent).

The null hypothesis was rejected for affect, but not so for loudness. A summary of the analyses is presented in Tables 11 and 12.

Table 11a
 Posttest Means, Standard Deviations Across Treatments for
 Measure: Affect

Treatment	N	$\bar{X}$	SD
MOD	16	3.48	1.27
DR	13	3.33	1.11
MOD + DR	16	3.92	1.15
CONT	16	2.67	0.73

Table 11b
 Summary of Two-Way Analysis of Variance
 Comparing Treatments and Schools on
 Measure: Affect

Source	df	MS	F	P
A (Treatment)	3	4.338	3.522*	0.02
B (School)	2	5.158	4.189*	0.02
AxB	6	2.938	2.386*	0.04
Error	49	1.232		

*Significant for a two-tailed test

Table 11c
 Summary of Three-Way Analysis of Variance
 Comparing Treatments, Confederate Sex, and
 Subject Sex on Measure: Affect

Source	df	MS	F	P
A (Treatment)	3	4.808	3.124*	0.04
B (Confed Sex)	1	4.487	2.916	0.09
C (Subject Sex)	1	0.048	0.031	0.86
AxB	3	0.632	0.411	0.75
BxC	1	2.673	1.737	0.19
AxC	3	1.199	0.779	0.51
AxBxC	3	0.294	0.191	0.90
Error	45	1.539		

* Significant for a two-tailed test

Table 12a
 Posttest Means, Standard Deviations Across Treatments for
 Measure: Loudness

Treatment	N	$\bar{X}$	SD
MOD	16	3.33	1.12
DR	13	3.31	1.21
MOD + DR	16	3.56	1.07
CONT	16	2.81	0.74

Table 12b
 Summary of Two-Way Analysis of Variance
 Comparing Treatments and Schools on
 Measure: Loudness

Source	df	MS	F	P
A (Treatment)	3	2.636	2.196	0.10
B (School)	2	4.587	3.822*	0.03
AxB	6	2.373	1.977	0.09
Error	49	1.200		

*Significant for a two-tailed test.

Table 12c
 Summary of Three-Way Analysis of Variance
 Comparing Treatments, Confederate Sex, and
 Subject Sex on Measure: Loudness

Source	df	MS	F	P
A (Treatment)	3	1.856	1.364	0.27
B (Confed Sex)	1	4.275	3.143	0.08
C (Subject Sex)	1	0.236	0.174	0.68
AxB	3	1.814	1.334	0.28
BxC	1	2.395	1.761	0.19
AxC	3	0.591	0.434	0.73
AxBxC	3	0.454	0.334	0.80
Error	45	1.360		

Tables 11b and 11c indicate that the "Treatment F-ratio," the "School F-ratio," and the "Treatment x School F-ratio" for affect were all significant at the .05 level for a two-tailed test. Table 12b shows that only the "School F-ratio" for loudness was significant.

It certainly appears that the groups were rated as being quite different according to the subject's tone of voice. The Scheffé Multiple Comparisons Test was used to test for statistical significance between each of the treatment group means. The results are presented in Table 13.

Using an alpha level of 0.10 (see Section A), the difference between the means for the MOD + DR and the CONT groups, and the means for the MOD + DR and the DR groups were found to achieve statistical significance. It was concluded that the combined modeling and directed role-playing treatment package did result in subjects showing greater affect than the control group subjects. The results showed, moreover, that the combined treatment package indeed was more effective than the directed role-playing package for teaching this particular skill. There were no differences between the other two treatment packages (MOD and DR) and the control group.

Table 11b also shows that there was a significant interaction effect between treatment and school for affect. Thus one or two of the schools obtained better results on this measure with one or more treatments than the other school. Finally, Tables 11b and 12b show that there was a significant school effect for both affect and loudness. Subjects in one or two schools showed significantly greater or perhaps lesser affect and loudness than the other. Once again, the explanation

Table 13
 Probability Matrix for Scheffé Multiple
 Comparison of Treatment Means for Measure:
 Affect

Group	DR	MOD + DR	CONT
MOD	0.22	0.88	0.12
DR		0.06**	0.21
MOD + DR			0.02*

* Significant for a one-tailed test.

** Significant for a two-tailed test.

here could well be related to the socioeconomic differences between the schools.

Although no significant difference was obtained between groups on the measure of loudness, it appears that the MOD + DR group was rated highest, while the control group again was rated lowest.

Hypothesis V

The prediction was that the subjects in the treatment groups would be rated no differently than those in the control group on the global measure of overall assertiveness. Table 14 includes a summary of the results.

Table 14c shows that the "Treatment F-ratio," the Confed Sex F-ratio," the "Treatment x Confed Sex F-ratio," and the "Confed Sex x Subject Sex F-ratio" were all significant at the .05 level for a two-tailed test. Since there were significant treatment effects between the groups on this measure, the Scheffé procedure was again used to test for statistical significance between each of the treatment group means. The results are presented in Table 15.

Using an alpha level of 0.10 (see Section A), the difference between the means for the DR and CONT groups, and for the MOD + DR and the CONT groups were found to achieve statistical significance for a one-tailed test. The results provided evidence for the rejection of the null hypothesis, and it was concluded that the directed role-playing package and the combined modeling and directed role-playing treatment package resulted in subjects exhibiting greater overall assertiveness than the control group subjects. There were no significant differences, however, between the treatment groups.

Table 14a
 Posttest Means, Standard Deviations Across Treatments for
 Measure: Overall Assertiveness

Treatment	N	$\bar{X}$	SD
MOD	17	3.47	1.25
DR	17	3.55	1.39
MOD + DR	17	3.53	1.40
CONT	19	2.54	1.08

Table 14b
 Summary of Two-Way Analysis of Variance
 Comparing Treatments and Schools on
 Measure: Overall Assertiveness

Source	df	MS	F	P
A (Treatment)	3	2.125	1.294	0.29
B (School)	2	1.245	0.758	0.47
AxB	6	2.842	1.729	0.13
Error	58	1.643		

Table 14c
 Summary of Three-Way Analysis of Variance
 Comparing Treatments, Confederate Sex, and
 Subject Sex on Measure: Overall Assertiveness

Source	df	MS	F	P
A (Treatment)	3	4.589	3.240*	0.03
B (Confed Sex)	1	8.782	6.199*	0.02
C (Subject Sex)	1	2.848	2.003	0.16
AxB	3	4.030	2.845*	0.05
BxC	1	7.179	5.067*	0.03
AxC	3	0.515	0.363	0.78
AxBxC	3	1.064	0.751	0.53
Error	54	1.417		

*Significant for a two-tailed test.

Table 15
 Probability Matrix for Scheffé Multiple
 Comparison of Treatment Means for Measure:
 Overall Assertiveness

Group	DR	MOD + DR	CONT
MOD	0.99	0.99	0.11
DR		0.99	0.08*
MOD + DR			0.09*

*Significant for a one-tailed test.

It may be noted that some discrepancy exists between Treatment F-ratios in Tables 14b and 14c. The addition of the third level (Subject Sex) in the analysis, plus the fact that the B levels were different in each case (with different degrees of freedom and unequal cell N's), probably accounted for this result. As a further check on the significance of the treatment effects, another two-way ANOVA was carried out replacing level B "School" with "Confed Sex." The results are shown in Table 16.

A comparison of Tables 14b (two-way ANOVA with School), 14c (three-way ANOVA with Confed Sex), and 16 (two-way ANOVA with Confed Sex) shows that the characteristics of the B level indeed contributed to the disparity in the Treatment F-ratios. In any case, the treatment effects retained significance.

It can also be seen in Tables 14c and 16 that significant F-ratios appeared for the sex of the Confederate, plus the interactions of Confederate Sex with treatments, and Confederate Sex with sex of the subject. Thus the Confederates uniformly elicited more, or less, overall assertive behavior depending on their sex. Moreover, the influence of the sex of the Confederate varied depending upon the treatment condition. Furthermore, one of the Confederates effected greater assertiveness in either sex of the subjects, and the opposite held for the other Confederate.

C. Inter-Correlations Among the Outcome Measures

Pearson product moment correlations were carried out to determine the relationships, if any, among the outcome measures. A summary of the results appears in Table 17.

It may be noted that the correlations matrix is divided into three

Table 16
 Revised Summary of Two-Way Analysis of Variance
 Comparing Treatments and Confederate Sex on
 Measure: Overall Assertiveness

Source	df	MS	F	P
A (Treatment)	3	4.138	2.751*	0.05
B (Confed Sex)	1	8.912	5.925*	0.02
AxB	3	4.279	2.845*	0.04
Error	62	1.504		

*Significant for a two-tailed test

Table 17
Correlations Matrix for the Outcome Measures

	Latency of Response	Duration of Response	Total Time	Number of Requests	Affect	Loudness	Overall Assertiveness
	N = 64				N = 55		
Latency of Response	1.00	-0.36	0.44	-0.62	-0.36	-0.37	-0.44
Duration of Response		1.00	0.68	-0.06	-0.53	-0.52	-0.75
Total Time			1.00	-0.55	-0.61	-0.61	-0.84
Number of Requests				1.00	0.49	0.39	0.57
					N = 61		
Affect					1.00	0.91	0.86
Loudness						1.00	0.79
Overall Assertiveness							1.00

sections of different N's. Since certain measures contained missing data, an accurate comparison could be made only under these N conditions. Thus the samples for which the measures were compared are not independent and significance levels cannot be evaluated.

Examination of Table 17 shows that the highest correlations were overall assertiveness with duration of response and total time (in a negative direction), and overall assertiveness with affect and loudness (in a positive direction). Thus, greater assertiveness was associated with shorter response durations and less total time to respond, greater tone of voice, and greater loudness of speech. Furthermore, loudness correlated highly with affect (the greater the loudness, the greater the affect). These results are in agreement with the predictions made earlier (see Chapter III, Section G), and they suggest that the behavioral components of assertiveness specified in this study are indeed valid indicators of assertive behavior.

It may be noted that although latency of response and duration of response correlated positively with total time, latency of response correlated negatively with duration of response. This could be explained by the fact that, although the latency and duration times were combined to give total time (hence the positive correlation), a short response latency often was followed by a long duration of response. That is, while some subjects may have quickly asked for their pencil/eraser back at first, they did not necessarily follow up by asking again immediately, or even the required three times.

D. Awareness of Appropriate Assertive Behavior--the Questionnaire

As was discussed in Chapter III, the first purpose of the questionnaire entitled "What Would You Do First If?" (Appendix E) was

to discover whether or not the subjects would claim they would respond assertively in everyday situations. Thus an attempt could be made to determine whether their knowledge of the norms of appropriate assertive behavior (of what they "should" do) corresponded to their actual behavior in the test situation.

Answers to the questionnaire indicated a high degree of assertive responses in four of the five hypothetical situations. An assertive response included a behavior which allowed the child to stand up for his rights.

Table 18 indicates that the lowest percentage obtained for any question, except question 5, was 63. The lowest group mean, however, was 75%. Question 5 asked the child what he would do if someone accused him of having taken some money and then asked him to empty his pockets. Although an individual does have the right to refuse to allow himself to be searched, most of the children opted for emptying their pockets as proof that they indeed had not taken the money. In some ways, this show of honesty may preclude standing up for one's rights if one is indeed positive of his innocence; thus, this is an adaptive, although nonassertive, response. Therefore, question 5 aside, it was concluded that children of this age group are aware of a norm of appropriate assertive behavior in situations similar to that in the experimental setting.

However, in the actual test situation, not only did the subjects not behave assertively (on the average only 57% of the subjects got their pencil/eraser back), but also 63% of the subjects reported at the conclusion of the test that they were upset or quite angry about what happened in the test situation. Yet they did not assert themselves.

Table 18
 Percentage of Subjects in Each School
 Choosing the "Assertive" Responses on the Questionnaire

Question	School			Mean
	1	2	3	
1	82.1	86.9	73.6	81.4
2	73.3	82.6	68.4	75.0
3	90.0	69.6	63.2	76.4
4	80.0	82.6	84.2	81.9
5	23.3	8.7	5.3	13.9

The second purpose of the questionnaire was to determine if there existed an "acquisition versus performance" difference between and among the groups. That is, did the treatment groups acquire any more knowledge of appropriate assertive responding than the control group? A summary of the results of this analysis appears in Table 19.

Table 19 shows that there were no differences between the groups with respect to number of assertive responses chosen on the questionnaire. Although there was no significance ($p = 0.07$), the trend seems to be that the MOD group made the most number of responses, while the other three groups did not differ. It would seem then, that the subjects in the modeling group probably "acquired" more assertive knowledge than the control or the other two treatment groups. Therefore, one might speculate that viewing only one scene, or merely practicing the scene once or twice is not sufficient for acquisition of "assertive knowledge." Yet, as the results of the study seem to indicate, the modeling subjects may have acquired the skills cognitively, but not necessarily behaviorally (although the trends are in the right direction. Alternatively, the subjects may have known what to do and could do it, but they were inhibited. Had the subjects, on the other hand, been told to act assertively in the situation (without inhibition), their performance may have been maximized and the necessary behavioral skills evidenced. The implications are that perhaps by adding role-playing to the complete modeling package such that any inhibitions could be "desensitized," significant results may be obtained behaviorally.

Table 19

Means, Standard Deviations and Analysis of Variance Across
Treatments for Number of "Assertive" Questionnaire Responses

Treatment	N	$\bar{X}$	SD
MOD	17	3.76	0.56
DR	17	3.12	0.99
MOD + DR	17	3.12	0.93
CONT	19	3.16	0.83

*Note: Max. no. of responses = 5 (1 per question)
Min. no. of responses = 0

Analysis of Variance

Source	df	MS	F	P
Groups	3	1.723	2.410	0.07
Error	66	0.714		

E. Summary of the Results

In summary, the foregoing analyses of the data collected suggest that:

1. The use of a fifteen minute modeling and role-playing treatment package or a directed role-playing treatment package alone resulted in elementary school children in a specific test situation exhibiting significantly greater scores than a control only on the measures of affect and overall assertiveness.

2. Although non-significance appeared across the remaining six outcome measures, the trend seemed to show that the control group scored consistently lowest in assertiveness on these measures. On the specific response measure and the "time" measures, the group viewing the modeling videotape was rated highest, and on number of requests and loudness, the combined modeling and role-playing group was rated the more assertive.

3. The combined modeling and role-playing treatment package resulted in greater affect in the subjects than the role-playing treatment package alone, but did not result, however, in greater affect relative to the modeling package alone.

4. Across the remaining seven outcome measures, no significant differences were found between the modeling package, the role-playing package, and the modeling plus role-playing package.

5. Greater overall assertiveness appears to be associated with shorter duration of response, less total time to respond, greater affect, and greater loudness of speech.

6. Although the subjects, in general, were aware of the norms of appropriate assertive responses, the tendency seems to be that those subjects who simply viewed the modeling videotape "acquired" more

knowledge of the appropriate responses than did those who role-played one situation, role-played one scene and then viewed it, or received no situations at all. Furthermore, having the awareness did not necessarily mean that the behavior was carried out in the actual situation.

Discussion

Several factors may have accounted for the failure to obtain more statistically significant results in this study. Included are those factors related to the outcome measures and the actual treatment procedures.

A. The Outcome Measures

The treatment groups were found to be strongest on the measure of overall assertiveness, and scores on the remaining measures all showed positive directionality, approaching statistical significance at the .05 level. Although the specific response of getting the pencil/eraser back failed to reach this level, it did discriminate well between the groups and served as a reliable measure in the pilot study. Loudness and number of requests did not seem to be sufficiently sensitive in discriminating between the groups, but the results were again in the right direction. With respect to number of requests, some subjects would ask for their pencil/eraser twice, but would not ask a third time. Originally, this variable was intended to serve as a measure of persistence--that is, the more requests one makes, the more persistent he is. It is quite possible, however, that this purpose may have been in contradiction with the major goal of measuring assertive behavior. Since many subjects who asked twice did not ask any further, it would seem that failure to get the pencil/eraser back

resulted in the situation becoming a punishing instead of reinforcing one. In other words, they had in fact asked twice (some would say they even asserted themselves), and instead of being rewarded by getting the pencil/eraser back, they were not. Further research should take this paradox into account--is one interested in a measure of assertiveness or persistence? If both, can they be measured using the same test?

Among the three "time" measures, it was noted that there was considerable variation between and among the groups. It would seem then, that these components would not be useful measures of assertiveness in children in further studies. Perhaps some other behavioral measures such as body posture, absence or presence of smiling, hand gestures, and so on may be fruitful alternatives for examination.

B. The Treatments

The present study consisted of only brief fifteen minute exposures to treatment. It is highly likely, however, that for these treatment packages to be more effective, such a short period of time is insufficient. Perhaps only one situation, for instance, did not permit the subjects to totally comprehend the purpose of the role-playing. A crucial point also is the motivation of the subjects to want to learn or benefit from the treatment experience. Since the subjects in this study were sampled from a "normal" population and not from a specifically nonassertive population, the experience may not have been relevant or intensive enough for them. In other words, since there was no "problem," perhaps the treatment was regarded only as a game or an exercise. Had the subjects been advised that they were participating

in a program specifically designed to teach them how to respond with appropriate assertion (to stand up for their rights) in certain conflict situations, greater significance may have occurred. Indeed, most of the subjects in the treatment studies reviewed in Chapter II were completely aware of the nature of the treatment.

Furthermore, had the modeling videotape contained recorded narratives or commentary pointing out the appropriate skills (similar to the coaching), treatment effects may have been enhanced. Direct experimental support for the importance of the narrative in modeling was reported by Spiegler, Liebert, McMains, and Fernandez (1969), who demonstrated that a narrated model film was effective in treating snake phobics, but that neither the film without the sound track nor the sound track without the film was effective. Borgen (1976) as well found that verbal commentary added to the modeling was more effective than either straight modeling or a control in teaching children certain group discussion skills.

Some of the results of this investigation would seem to repudiate the findings in Perkins' (1972) study that neither short-term assertive training, modeling, nor a combined procedure was effective in producing a change in assertive behavior. Rather, results here would tend to support the majority of the findings discussed in Chapter II that modeling with role-playing may be an effective mode for teaching certain skills to children.

The review of the literature (see Chapter II) indicated that the modeling treatment, the role-playing treatment, and the modeling plus role-playing treatment should be equally effective in teaching assertive skills to the subjects. The results tended to suggest that there may

exist an additive effect of modeling with role-playing. Parr (1974) found somewhat similar results. Although McFall and Twentyman (1973) found that behavioral rehearsal (role-playing) seemed to be the most important variable in effective change, the present investigation was unable to determine whether the modeling or the role-playing component was the more important. The results suggest only that the role-playing may have contributed to performance of the behaviors, while modeling may have been stronger with regard to straight conceptualization or "acquisition."

CHAPTER V

Summary and Conclusions

A. Summary

The general purpose of this study was to investigate the relative effectiveness of three different types of treatment packages in teaching assertive skills to elementary school children over a fifteen minute period of treatment time. Two general hypotheses were postulated which proposed that a modeling package, a directed role-playing package, and a combined modeling plus directed role-playing package would be no more effective than a control group, and no different relative to each other.

The results, tabulated, analyzed and interpreted in the previous chapter, demonstrate that statistically significant differences were obtained on only two of the eight designated measures of assertiveness including the global measure of overall assertiveness, and that a strong trend in the predicted direction appeared on the remaining six measures. Thus subjects in the modeling package, the directed role-playing package, and the combined modeling and directed role-playing package tended to: be more successful in getting back their pencil/erasers; respond quicker, with less duration and over less total time; make more requests; and exhibit more appropriate affect, greater speech volume, and greater overall assertiveness. However, only affect and overall assertiveness achieved statistical significance.

Aside from the treatment effects, other interesting outcomes and interactions were observed. Significant school effects were obtained on number of requests, affect and loudness. Significant Confederate

sex effects were noted on number of requests and overall assertiveness. Significant treatment x school interactions occurred on latency of response and affect, while a significant treatment x Confederate sex interaction was observed on overall assertiveness. Finally, there were sex differences found on number of requests, and a significant interaction effect was noted between Confederate sex and subject sex on overall assertiveness. Thus the children in the schools did not respond uniformly to the treatments (an attempt was made to explain these results in terms of socioeconomic differences); on two occasions, the Confederates elicited different responses from the subjects; and the male and female subjects reacted differently on one of these. It was expected that more interaction effects between Confederate sex and subject sex would occur, but this expectation was not supported.

B. Conclusions

Dorman (1973) states that assertive behavior is a relatively stable characteristic of preschool children. Yet, by the time these children reach high school, a good percentage of them are nonassertive or inappropriately so (Rathus and Ruppert, 1973). Why they "lose" their assertiveness is not answered by this study. It may be that they were never reinforced for being assertive, and thus this behavior was extinguished or restrained. The child may have been punished for exploratory or assertive behavior, and punishment inhibits specific behaviors. Children are often punished by parents and other authority figures for standing up for themselves and for asking why they should do those things that are asked of them. Thus, as they reach adolescence, assertive behavior may drop out of their response repertoires.

The task of society, especially schools, would seem to be to attempt to arrest this problem early in the child's life. Every child should have the freedom and the right to act with assertive competence rather than with unadaptive responses such as passivity or aggression. Neither of these contributes toward the integration of the child and his social group.

The implications of this study are evident. Firstly, in the area of pre-testing, the test situation in this study may provide a simple but effective means of measuring and identifying specifically nonassertive subjects in a population of Grade 6 children. Secondly, with longer treatment time, prompting, commentary, and generalizability beyond the experimental situation, the treatment packages could be employed as they are therapeutically in the clinical setting, or alternatively, they could be developed into teaching packages for teachers and educators to use in the school curriculum, for example, in the social studies area. Since the results tend to show modeling with role-playing to be a powerful procedure, a program including perhaps employing the teacher or assertive peers as models (or even viewing the modeling videotape itself), together with role-playing the necessary assertive behaviors, may well be an important developmental consideration for helping children retain assertive skills before they lose them, or teaching the skills to those who no longer possess them.

C. Suggestions for Further Research

1. Obviously more research needs to be done in the area of extending the time of treatment and conducting periodic follow-up studies to assess the effectiveness and permanence of the treatment programs.

2. Further study investigating the relative contributions of the individual variables comprising a "total" treatment package (eg. all 8 modeling scenes plus the role-playing of each scene versus role-playing 8 scenes only versus modeling only). would seem necessary in understanding their effects in the treatment process.

3. Further research might be carried out to assess the treatment effects of these packages on a selected nonassertive sample of Grade 6 children.

4. Investigations employing alternate test situations, comparing a variety of test situations versus one, and controlling for the sex factor and socio-economic status would perhaps answer some questions regarding generalizability and other issues of external validity.

5. Further research into the question of model similarity--adult versus peer versus self-as-model--as well as the question of live models (teachers and peers), would seem to have important implications for the use of these treatment packages in assertive training with children.

6. Extending the use of these programs in other areas of social adjustment would prove worthwhile.

7. Percell, Berwick, and Beigel (1974) found, for both men and women psychiatric outpatients, a substantial positive relationship between greater assertiveness, more self-acceptance, and less anxiety. In the present study it was observed that those subjects who did assert themselves and got their pencil/eraser back seemed more often to report feeling pleased with themselves than not. A controlled investigation confirming this observation, and comparing it with the Percell et al. (1974) study would be an important contribution.

8. As Dorman (1973) suggests, obviously more research needs to be done concerning the determinants of assertion and the variables that foster or hinder its development. This question must be answered both developmentally and situationally. "The answers... bear many implications for child rearing and for teaching, important enough implications to warrant further study" (Dorman, 1973, p. 161).

9. Related to the question of the development of nonassertiveness, a comparative study of relative age groups perhaps would prove useful in assessing levels of assertiveness at different stages of life (for example, early elementary to later elementary to high school to adulthood).

10. Still related to the developmental question, would the findings of the present study be similar or different if early elementary or high school students, rather than Grade 6 subjects, were employed? If different, what experimental changes might be necessary?

FOOTNOTES

FOOTNOTES

¹The Modeling videotape accompanying this thesis is entitled "Assertiveness Training Situations," and can be located in the Audio Visual Media Center Tape Library, Faculty of Education, University of Alberta, Accession #A0224.

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APPENDICES

APPENDIX A: Sample of One of the Letters Sent to Parents

Edmonton Public School Board

EDMONTON ALBERTA

(Name of School)

March 22, 1976

Dear Parent or Guardian:

Certain grade six students in _____ will be taking part in a study that is being conducted by the University of Alberta. The general purpose of this study is to develop a program for teaching children appropriate social behavior.

The study will be taking place in the school. Each child will be out of class for about 30 - 45 minutes on the day of the study (in the last week of April). The children will be cared for and adequately supervised during the time they are participating in the study. The results will be used only for research purposes and will, of course, be confidential.

Your child may be one of those selected to participate in the study. Since the children's reactions will be video-taped, and in order that we may be sure that we are not proceeding contrary to your wishes as a parent, may we ask you to complete this form letter today, and have your child return it tomorrow to the school in the same envelope provided. We are asking you this far in advance so that the necessary arrangements can be made.

My child, _____, who is currently enrolled
(print full name)
at _____ has my permission to participate in video-tape recordings and in the study being conducted by the University of Alberta, Edmonton, Alberta, with the understanding that he/she will be cared for and adequately supervised during that time. It is further stipulated that the video-tape recordings and the results of this study will be used only for educational and research purposes.

Parent or Guardian's Signature

Home Address

Date

Thank you very much for your cooperation.

Mr. _____
Principal _____
_____ School

Howard Rudner
Dept. of Educational Psych.
University of Alberta

APPENDIX B: Instructions to Subjects re "Maze" Study

"Good morning (afternoon) kids. My name is Miss _____ and I'm from the University of Alberta. I'm doing a study comparing how boys and girls in Grade 6 and 7 work on a certain maze puzzle. Each of you will be competing one at a time against a Grade 7 student to see who can do more of the puzzle in 3 minutes. Your work is very important to me so try your best and work as quickly as you can. Here is a maze for you to practice on while you wait. It's similar to the one you'll be doing. There are at least 3 different ways of doing the puzzle. See how many you can find.

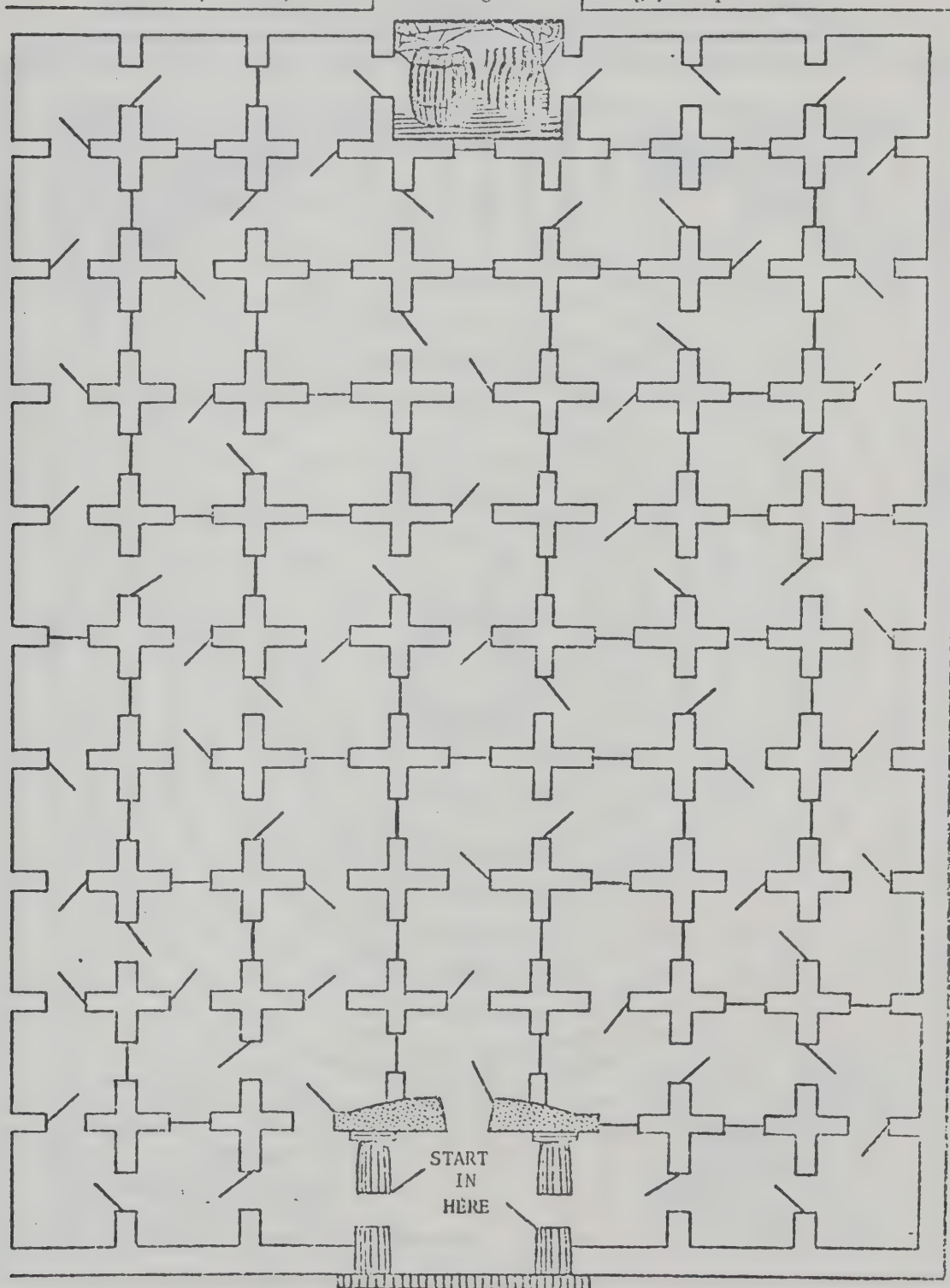
After you have finished here with me, please do not tell your friends or classmates what you did or saw. It's very important that they don't know until after we're finished today. You can discuss it after school. I'll be back in a couple of minutes to start taking you one at a time to the test room.

Thank you for your cooperation."

APPENDIX C: Practice Maze Puzzle

(Reproduced from Shepherd, 1973 - reduced)

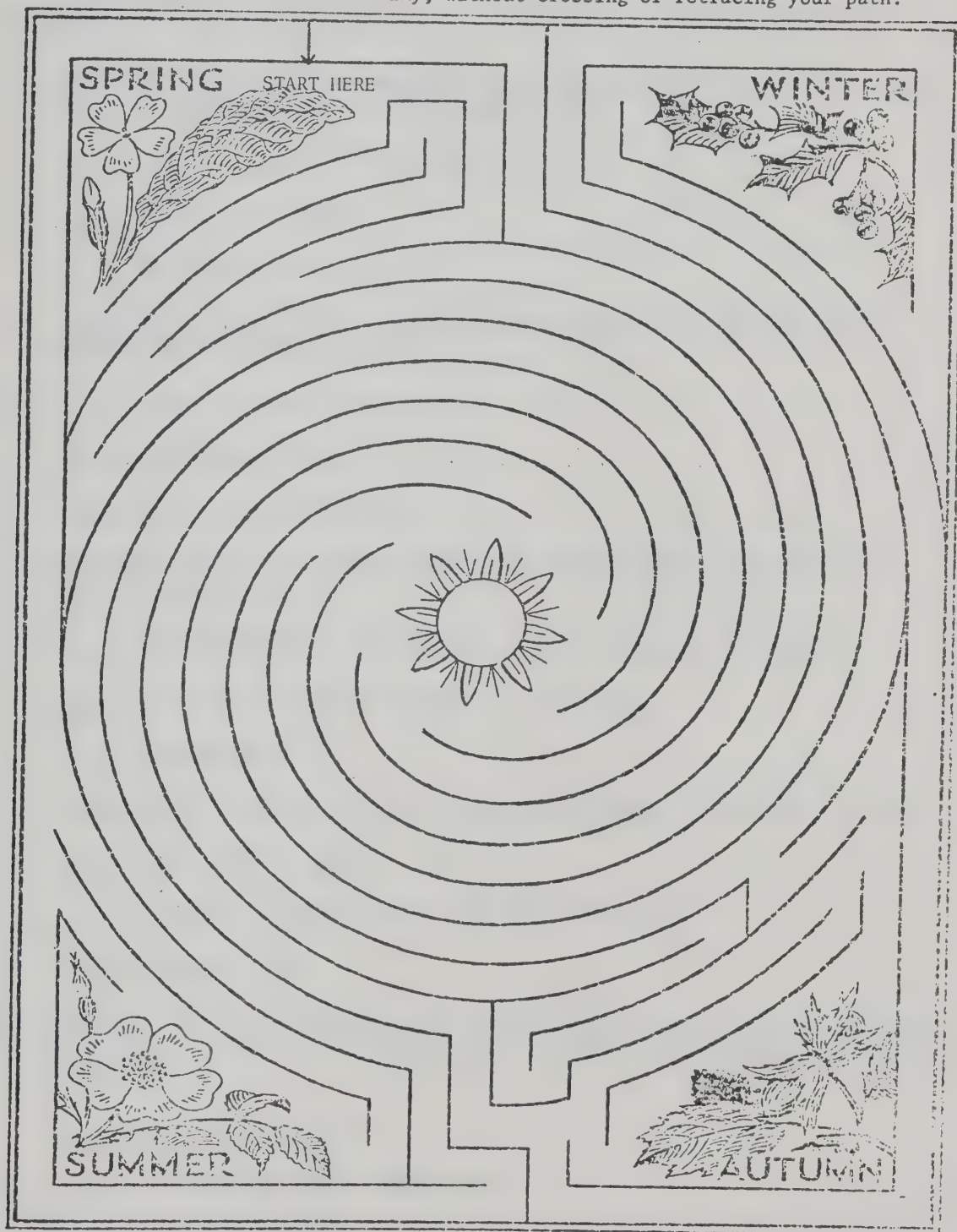
Find your way from the open bottom square to the wine bottles at the top as fast as you can, without crossing or retracing your path.



APPENDIX D: Test Maze Puzzle

(Reproduced from Shepherd, 1973 - reduced)

Start at the SPRING and run through the seasons in order (SUMMER, Autumn and round to WINTER), without crossing or retracing your path.



APPENDIX E: Questionnaire

Name _____ School _____

Group _____

What would you do first if... (Check (✓) the most appropriate answer.)

1. A friend of yours kept bugging you to go to the store after school when you know you are not allowed to go?

_____ tell him you can't go and that's it

_____ ignore his request

_____ go to the store anyways

2. Somebody in your class messed up the board after you had just worked hard at cleaning it?

_____ clean it again

_____ tell the teacher

_____ tell him to clean it

3. The math teacher explains something new in class that you don't really understand?

_____ ask the teacher during the class to explain it again

_____ ask your friend or parents to help you

_____ forget about it

4. Somebody in a movie takes your good seat when you go buy a drink?

_____ take another seat

_____ tell him it's your seat and ask him to move

_____ push him off

5. Somebody in your class accuses you of having taken \$5 that belongs to them, and asks you to empty your pockets (even though you didn't take it)?

_____ empty your pockets

_____ tell him he can't search you

_____ tell the teacher

APPENDIX F: Explanation for Judges

You will be viewing videotapes of Grade 6 children who were placed in an experimental situation this Spring. Each child participated in one of four treatment groups. After the prescribed treatment, each was taken to a "test" situation where he was asked to complete a maze. In this test situation, each child encountered a Grade 7 student (a Confederate) working at his table. After a short period of time, the child was asked by the Confederate for his pencil/eraser. After three minutes had elapsed, the experimenter reentered the room and stopped the test.

You will be judging the degree to which the child asserted himself to keep his pencil/eraser or get it back.

APPENDIX G: Rating Scale

Subject Sex: M F
 Confederate Sex: M F

Judge _____
 Tape No. _____
 Subject No. _____

Rate the child according to the behaviors below:

- a. latency of response: _____ seconds
 b. duration of response: _____ seconds
 c. total time to get pencil back (a & b): _____ seconds
 d. number of requests: _____
 e. keeps the eraser or gets it back: Yes _____ No _____

	1	2	3	4	5
very flat, unemotional tone of voice					full, live appropriate intonation

	1	2	3	4	5
very low voice					appropriate voice level

	1	2	3	4	5
very unassertive					very assertive

APPENDIX H: Distinction Between Assertion and Aggression

A. Excerpted from Chittenden's (1942) Rating Scale (p. 84):

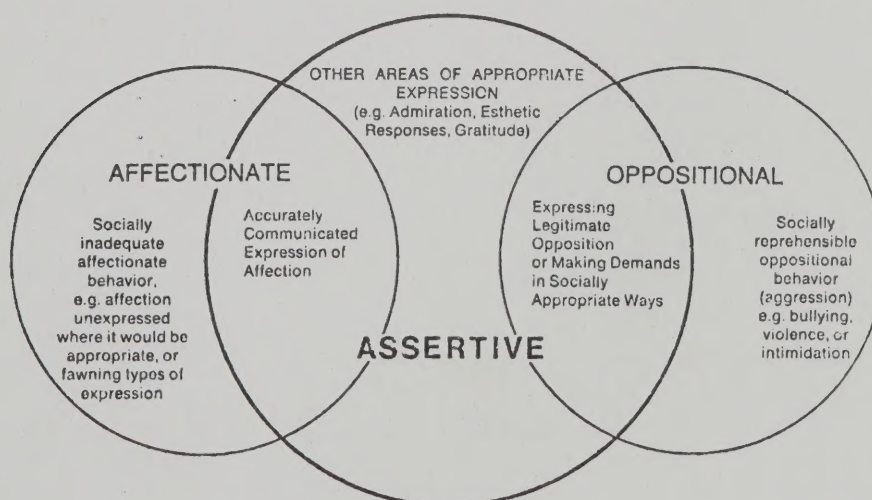
Category A (Aggression): This category includes the following types of behavior when they are used in initiating social contacts: verbal behavior such as commanding, giving directions, and threatening; physical behavior such as grabbing toys, hitting, kicking, pushing, and threatening by gesture.

Category B (Assertion): This category includes suggestions for the joint use of material, suggestions for taking turns, bargaining, reasoning, and asking another child for a toy; agreements to take turns and to use material jointly and the actual carrying out of such agreements.

(labelling of categories is this author's own).

B. The Interrelations Between Assertive and Other Categories of Behavior (Wolpe, 1973, p.89):

Assertive behavior, defined as expressing emotions other than anxiety in a socially acceptable way, involves many categories of emotional behavior. The most common of these categories is oppositional behavior (e.g. standing up for reasonable rights). Types of oppositional behavior outside the assertive category are the provocative, the aggressive, the violent, and, often, the sarcastic.



Interrelations between assertive, oppositional, and affectionate categories of behavior.
(Courtesy of Graphic Communications, Eastern Pennsylvania Psychiatric Institute, Philadelphia.)

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